

# AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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## CONTENTS :

Editorial Notices ; Potomac Aqueduct ; School of Civil Engineers ; Mohawk Railroad . . . . .	page 321
On the Substitution of Locks for Inclined Planes on Railways, as applicable to the New-York and Erie Railroad ; Observations on the Liverpool and Manchester Railway, by D. Stevenson . . . . .	322
Report on the Memorial of the American Institute of the City of New-York, for a Geological Survey of the State of New-York . . . . .	324
Wire Suspension Bridges . . . . .	325
On the Use of Heated Air in the Iron Works of England and Scotland (continued) . . . . .	326
Depths of the Most Remarkable Fountains which have been opened by the hand of Man . . . . .	328
Influence of Comets ; Railroad Items, &c. . . . .	329
Literary Notices ; Summary ; Foreign Intelligence ; Miscellany ; Advertisements, &c. . . . .	330-36

## AMERICAN RAILROAD JOURNAL.

NEW-YORK, MAY 30, 1835.

On our second page will be found another communication on the subject of *Railroad Locks*. We ask the attention of engineers to the subject, and should like to have the *Journal* made the medium of a discussion of its merits.

The observations on the Liverpool and Manchester Railroad will be found interesting.

The Report of a committee of the New-York Legislature recommending a geological survey of the State, should be read by all who take an interest in the development of the resources of the State.

**Potomac Aqueduct.**—A recent visit and personal inspection of the works of the Alexandria Canal Company at the Potomac Aqueduct, has given us new ideas of the magnitude of that undertaking—the extent of the difficulties that have been surmounted, and the labor and skill required in its construction. Scientific gentlemen, who have travelled much in this country and in Europe, assure us that no similar work was ever constructed in the United States, and in Europe but few of the governments have undertaken any thing to compare with it. What an exhibition does this present of individual enterprise!—we were about to say of heroic determination on the part of a community to sustain itself. If Congress does not come to the rescue of such a community and such a work, it will be lost to every principle of justice; it will have forgotten the first of its duties.

Those of our citizens who have leisure and op-

portunity, ought to examine this great work in which we are now all engaged.—[*Alexandria Gazette.*]

[This stupendous work, being nothing less than a structure for carrying a large navigable canal over the Potomac river, at an elevation of some thirty or forty feet above its surface, is under the direction of Capt William Turnbull of the U. S. Corps of Topographical Engineers, who, by the skilful manner in which he has so far overcome every difficulty in the prosecution of the work, has gratified all its friends, and removed the doubts of some who apprehended that the natural obstacles were too great to be surmounted.—[*National Intelligencer.*]

**SCHOOL OF CIVIL ENGINEERS.**—The trustees of Rensselaer Institute met on the 22d instant, to receive the statute passed the 9th instant, empowering them to organise a school of civil engineers as a branch of the Institute. Regular degrees of Civil Engineer are to be conferred by the President, Rev. Doct. Nott, in October annually, on those who are qualified theoretically and practically, and over 18 years of age. This is the first school of the kind ever organized on this continent. The Royal Military Academy at Woolwich, England, and the Polytechnia, in Paris, have branches nearly similar. Professor Eaton takes the immediate charge of this department; Adj. Prof. Hall having been appointed to take the chief charge of the Natural Sciences. A very spirited corps of 6 or 8 young gentlemen have already entered the division, and will probably offer themselves for the degree of Civil Engineer in October. Two afternoons in each week will be devoted to the application of elementary principles to works in this vicinity, such as railroads, canals, bridges, water-works, mill-works, factories, &c. &c.

The Board of Trustees now consists of the eight appointed members from Albany, Troy, Lansingburgh and Waterford, (two from each,) with the addition made by the late statute of the Mayor, Recorder, and one Alderman of this city. The list of officers stands thus: Rev. E. Nott, D. D., President; Judge David Buel, Vice President; Hon. George Tibbitts, Hon. J. P. Cushman, William D. Haight, Esq., *ex-officio*; Hon. Jesse Buel, and Philip Van Rensselaer, Esq. of Albany, Hon. J. D. Dickinson, and R. P. Hart, of Troy, are the Prudential Committee; Elias Parmelee, Esq. and Rev. Phineas L. Whipple, of Lansingburgh, Gen. Guert Van Schoonhoven, and the Hon. John Cramer, of Waterford, constitute the Board

of Trustees; Amos Eaton, Senior Professor and Agent, also Acting Professor of Civil Engineering; Ebenezer Emmons, of Williams College, Junior Professor; James Hall, Adjunct to the Junior Professor, and performing the duties of that office. Special Assistants are appointed temporarily, Dr. Moses Hale, Secretary, and H. N. Lockwood, Esq. Treasurer.

The degree of Bachelor of Arts, heretofore conferred on the general graduate, is changed to *Bachelor of Natural Science*. We consider this a good change, as the name is now more appropriate. The degree of Master of Arts is still retained as an honorary diploma for the general graduate, as well as the engineer, after three years of successful improvement in the useful application of his talent. E.—[*Troy Daily Whig.*]

To the Editor of the Railroad Journal:

DEAR SIR: In the statement which I gave you a few days since, relative to the route, as examined, of the Auburn and Syracuse Railroad, a comparison was instituted between that and some other roads. In that comparison the maximum inclination upon the portion of the Mohawk and Hudson Railway, between the inclined planes, was represented to be 37 feet per mile. This I obtained from a communication by L. De Witt Bloodgood, Esq. of Albany, to the Editor of the *American Journal of Science*, vol. xxi, p. 385. The facts in this article were "furnished by Mrs. Jervis;" and being the only document to which I had access at the time of writing, I could not question their accuracy.

I have since ascertained by reference to the *Railroad Manual*, and to Smith's Appendix to Woods Treatise on Railroads, that the maximum inclination of the Road mentioned is 32 instead of 37 feet per mile, or 5 feet less per mile, than on the Auburn and Syracuse Road, instead of 7 $\frac{1}{2}$  greater. This brings the average inclination upon the former 10 $\frac{1}{2}$  feet per mile, differing insensibly from that of the latter, which is 10 $\frac{1}{2}$ .

The general conclusion in my communication will not be very materially affected by this correction—but believing that the maximum inclination on the Mohawk and Hudson Road was overrated, I am desirous of correcting the error.

Yours, very respectfully,

E. F. JOHNSON.]



[For the American Railroad Journal.]

*On the Substitution of Locks for Inclined Planes on Railways, as applicable to the New-York and Erie Railroad.*

In a communication last week I endeavored to show the superiority of the railroad lock over any probable improvement of the locomotive engine, enabling it to propel its load over any considerable elevations. For in the latter case, there would be a liability, when the rails became smooth, and especially when covered with snow and ice, that the wheels of the engine would slide around in their places without rolling forward; and, even if this liability could be obviated, there must be a great waste of power. The engine must be sufficiently strong to carry its train up the steepest ascents on the road, and a greater part of its energies would therefore lie idle during the more level part of the journey.

These objections have heretofore been obviated by providing additional power to assist in these ascents; but the inclined plane generally employed in this case is liable to the greatest objections. Aside from the jeopardy in which life and property are placed in passing over these constructions, they have long been the subject of loud but almost hopeless complaint, and have even been characterised by writers on the subject, as "an opprobrium to the present advanced stage of civil engineering."

To say nothing of any other objection, the expense necessary to provide and keep in operation a stationary engine and its appendages is so enormous, that the necessity of constructing a very few of these is sufficient to render any contemplated route impracticable. I hardly need repeat, that the lock in question completely obviates this as well as many other difficulties. The locomotive engine raises itself and all its load at once, and by its own unassisted power. In this point of view, therefore, it will prove of almost incalculable importance.

This obstacle being thus removed, railroads can be constructed over routes now condemned as impracticable. But this is not all: the advantages arising from the successful introduction of these locks will not only appear from the change produced as to the practicability of entire routes, but also in that of their separate portions, where a road is deemed practicable. Still, in many of its sections, the difficulty of effecting a change of level occasions a very great circuitry of direction. Much of this may be avoided by the adoption of the locks in question, and the length as well as the expense of construction of the road be very materially diminished.

According to Williams' Register, the surveyed route of the New-York and Erie Railroad is 505 miles in extent, while the length of the mail route, passing through Newburgh, is only 415 miles. Now, had the latter left the Hudson at the same point as the contemplated railroad, that is to say, 24 miles from this city, the distance would have been still less, passing along one side of a triangle,

instead of two. I think therefore we may safely say, that the length of the surveyed route is 100 miles greater than a turnpike would be which should pass along the same general direction. This increase of distance has resulted, according to the report of the chief engineer upon the survey, from going around the high grounds instead of passing over them. Probably it would not be advisable to construct a railroad as direct as a turnpike. But suppose even 50 miles to be saved by the use of a moderate number of locks, and the mode of effecting this becomes an object of the most serious consideration. A diminution of one tenth of the whole length of the road, and of six or seven hundred thousand dollars in the expense of its construction, need only to appear practicable, to be regarded with the highest favor, not only by the proprietors of the work, but also by the public at large. The interest of the former in such a result is direct and immediate; that of the latter, although more remote and consequential, is nevertheless equally certain, since every diminution of the length of the road, or of the amount of expenditure, tends inevitably to diminish the cost of transportation.

It may be said that the increased accommodation afforded to the people of this State, from the increased length of a road winding through the valleys, removes the objections to this circuitry. Such a consideration would be of weight were the work intended merely for the benefit of those residing along its margin. But since it is designed, as one of the great thoroughfares between the fertile and growing west, and its natural commercial emporium—since it must necessarily be brought into immediate competition with the other avenues of traffic between the Atlantic and the valley of the Mississippi,—and since the attainment of the object for which it is to be constructed consequently depends upon its presenting the most direct—convenient and economical channel of communication,—every mile by which its length may be diminished, every penny and every moment which may be subtracted from the expense and time of transportation, every facility and inducement for the direct conveyance of property from one extremity of the road to the other, becomes a matter of moment. Instead therefore of forcing the trade of the broad and productive regions of the west to flow through a circuitous channel, for the bare accommodation of a few New-York merchants and farmers, let that channel be made as straight as practicable, and let the convenience of our people at home be provided for by branches and auxiliary railroads.

It will also be objected, that the expense of constructing the locks themselves has been altogether omitted in the preceding general estimate. It will be seen on a future occasion that this expense will be far overbalanced by an advantage not yet enumerated, resulting from the introduction of the machine in question.

*Observations on the Liverpool and Manchester Railway. By Mr. David Stevenson, Edinburgh—Read before the Society of Arts for Scotland, on the 25th February, 1835.*

The improvement of railway communication is now a subject of so much importance, that any observations relative to the construction of railways, or the best mode of conducting traffic on them, especially such as are elicited in the course of practical trials, will generally meet with some share of public attention. I, therefore, venture to address to this Society a few observations upon the Liverpool and Manchester railway, the most remarkable work of the kind hitherto executed, both as regards the railway itself, and the means of traffic employed on it. These observations occurred to me during a late professional engagement on that work under Mr. Mackenzie, of Liverpool; and though I do not think it necessary to give a lengthened account of the railway, I trust some of the facts which I have collected will be found sufficiently interesting to excuse me for having brought them under the notice of the Society.

The Liverpool and Manchester railway was opened on the 15th of September, 1830. Its formation and construction, including the erection of lodges, depots, and offices, is said to have cost about one million sterling, or at the rate of £33,300 per mile; but as much of the work was not done by contract, this railway cannot be taken as a criterion of the expense of operations of this nature, which now are executed at a much lower rate.

The whole length of the main line is thirty miles. It forms a double way, composed of four single tracks of rails, having several branches to towns and collieries on either side. These branches, in most instances, consist of only a single way, with passing places. Connected with the main line, there are many works of importance and interest, including three tunnels, sixty-three bridges, and several cuttings and embankments of great extent. The drainage of Chert Moss, and the conveyance of the Railway over that bleak and uncultivated tract of country, are also particularly worthy of notice; but as accounts of these works have already been made public, I shall not farther notice them.

Excepting at Whiston and Sutton inclined-planes, where the inclination is at the rate of one foot perpendicular to ninety-six horizontal, there is no part of the Liverpool and Manchester Railway more than one in 880; and the curves in no instance deviate from the straight line more than four inches in the chain, or 66 feet. The inclination of one in 880 is hardly felt by the locomotive engines, and the curves are so gentle as to affect their progress very little. But the inclines of one in 96 on the main line, and several of the curves on the branch lines, prove formidable impediments, by diminishing the speed of the engines, and occasionally causing them to stop. The distance between the rails forming the tracks is 4 feet 8½ inches, and the distance between the two railroads or ways is the same. The rails are of that form technically called "fish-bellied" edge rails; they are made of malleable iron, in lengths of 15 feet, and weigh at the rate of 35 lbs. to the yard. They measure 2 inches in breadth at the top, 2½ inches in depth at the chair, and 3½ inches in the middle.

It is worthy of remark, that, when these rails break, the fracture is generally a few inches from the part resting in the chair,



and never in the thick part of the rail, between the points of support, which has led to the adoption of a parallel rail in all cases of repair. This rail weighs at the rate of 40 lbs. to the lineal yard. At every 3 feet the rails rest in a cast-iron chair, which, including keys and spikes, weighs about 16 lbs. The chairs rest upon stone blocks in the cuttings where the ground is solid, and upon wooden sleepers on the embankments. The resting blocks contain 4 cubic feet of stone; two holes, 6 inches in depth and 1½ inch in diameter, are drilled in them, and into these, oak treenails are driven, to which the chairs are spiked. The sleepers are of oak or larch, and contain about 1½ cubic foot of timber; they measure from 9 to 10 feet in length, and being laid across the road, each sleeper gives support to both rails. When sleepers are used, a seat is cut in them for the chair, which is spiked down to them. A piece of cloth or felt dipped in pitch is generally interposed between the chair and the stone blocks, to make the seat more solid. The blocks occasionally split when the treenails are not driven home with care, but the sleepers are most frequently in want of repair and renewal.

The repair and keeping of the way was this year (1834) let by contract for £6000, being at the rate of £200 per mile. The contractor furnishes labor, chairs, keys and spikes, while the Railway Company furnish rails, blocks and sleepers. They calculate upon having to renew one chair per mile per day, and £720 per annum is taken as the outlay for keys and spikes. The workmen employed in repairing the rails, and keeping the road in good order, are called plate-layers, and the tear and wear is so great, that there is constant employment found for three men on every mile of the railway. The ballasting, in which the blocks and sleepers are embedded, consists of sand and broken stone, and forms a stratum two feet in thickness.

The Railway Company have had thirty-two locomotive carriages made, five or six of which are now out of use, and many of those at present on the road have been almost totally renewed. These carriages are all numbered and named. No. 1 is called the "Rocket." This engine was made by Messrs. Stephenson, the engineers, and is that which did them so much honor in carrying off the prize of £500, given by the Directors of the Liverpool and Manchester Railway for the best locomotive carriage. It has been little used, and is still in good repair.

The locomotive carriages used at present on the Railway are of three kinds, and are called train, luggage, and bank engines. The train engines average about 30 horses' power. They weigh about 8 tons, and cost about £900. The luggage engines are in general 35 horses' power, and weigh about 9 tons. They cost about £1000. There are only 2 bank engines, the "Goliath" and the "Samson," which are used for assisting the trains with passengers and luggage upon the inclined planes at Whiston and Sutton. They are about 50 horses' power, weigh about 12 tons, and cost about £1100. The cylinders of these different engines measure from 11 to 14 inches in diameter, and the length of stroke varies from 16 to 20 inches. The carriages used for conveying water and fuel for the engine are called tenders; they have 4 wheels, and are yoked behind the engines. They average, when loaded, about 4 tons weight, and cost about £150 each.

The principle on which the boilers are constructed is simple, and at the same time

very efficient. For this invention it is believed the Railway Company are indebted to their treasurer, Mr. Booth. The shell or outside coating of these boilers consists of sheet-iron, ¼ an inch in thickness. Brass tubes, 1-8 of an inch in thickness, and from 1 to 3 inches in diameter, are rivetted or fixed into the end plates of the boiler, and being open at both extremities allow the fire to pass freely through them. By this means a great surface of the water contained in the boiler and surrounding the tubes is exposed to the heat, and the steam is more quickly generated than in the common boilers. A steel ring, about 1-8 of an inch in thickness, 1 inch in breadth, and slightly tapered, is driven into the brass tube, after it is fitted into the boiler plate, by which means the tube is wedged against the plate, and thereby rendered water and steam tight. The tubes are proved by means of a water pressure of 50 lbs. on the square inch, and notwithstanding this, they frequently burst. When this accident happens, the engineer stops both ends of the broken tube with wooden plugs. The mechanics connected with the Railway prefer large tubes of 3 inches bore to the small ones, which are more apt to get choked with soot and ashes. The boilers are generally 7 feet long, and 4 feet in diameter, and contain about 70 or 80 of the small sized tubes. Round the boiler there is a lagging or casing of ½ an inch deal timber, fixed with iron hoops, which being a non-conductor, prevents the radiation of heat, and greatly facilitates the generation of steam, especially in frost, or in a damp state of the atmosphere. The time required for getting up the steam, even in the most improved boilers, is generally above an hour, when every thing is in a cold state. The Act of Parliament, in consequence of the smoke raised by pit coal, enforces the exclusive use of coke, which increases the expense of fuel about 40 per cent.

The cylinders are horizontal in all the locomotive carriages, with the exception of two, in which they are vertical, and these are not found to answer so well, and require more repair, the cause of which may be satisfactorily explained in the following manner:—When the cylinders are vertical, the machinery cannot yield to the up and down motion of the piston rod, and has consequently to bear the whole shock; while, on the other hand, when the cylinders are placed horizontally, the motion of the piston tends to impel the carriage along the rails, by which the shock is deadened, and has not so injurious an effect upon the machinery. The objection to horizontal cylinders, founded upon the more rapid abrasion of the lower side of the piston by the effect of gravity, is not found to have much force in practice. In some carriages the piston rods are connected to the outside of the two fore wheels; but in the improved engines they are connected to cranks on the axle of the carriage, in which case the cylinders are placed below the boiler, and are quite hid from view. On these engines also the wheels themselves are connected by rods, by which means the moving power is applied to four wheels instead of two, which doubles the adhesion of the carriage to the rails. The cross head at the end of the piston rod, working in a slide, produces the parallel motion. I may add, that some experiments were made on the Liverpool and Manchester Railway with Lord Dundonald's rotatory engine, which were of so favorable a nature as to induce the Railway Company to construct a locomotive carriage on that principle. I have not, however,

heard whether their efforts to introduce the rotatory system have proved successful.

The fire-box consists of a double casing of metal, with an intervening space of about 4 inches. This space is filled with water, and has a free communication with the boiler, of which it may be said to form a part. It has a grated or ribbed bottom for holding the fuel, about 9 square feet in surface. The smoke-box and the funnel are made of iron, and are indispensable for catching the dust and embers blown through the tubes, carrying off the smoke and steam, and causing a draught for the combustion of the fuel. In the improved engines, the waste steam is ingeniously blown into the tender, and heats the water for the supply of the boiler.

The framing in some instances is made of cast iron, but more generally of wood. It rests upon the axles, and supports all the machinery, together with the boiler and its accompaniments. Connected with it are the springs for rendering the motion as smooth as possible for the machinery. The carriages have generally 4 wheels, the "Atlas," however, and some others, have 6. In some carriages all the wheels are of the same size, and about 5 feet in diameter, while others have a smaller pair of wheels about 4 feet in diameter. The nave and rim are of cast iron, and the spokes and tires of malleable iron. Sometimes, however, the greater part of the wheels, like the framing, is made of wood.

It was lately suggested, as an improvement on locomotive carriages, to work the engines more slowly, and to produce the same or a greater speed, by increasing the size of the wheels. Wheels of 6 feet in diameter were accordingly applied to one of the engines, but were found to produce an unsteady motion, and so greatly to increase the liability of the carriage to start off the rails or break down, that they were immediately discontinued. The Railway Company at present allow no wheels more than 5 feet in diameter to be used on the line. The greatest speed which the engines have been able to attain on a level is 60 miles per hour, without a load. The Planet engine, with her tender, went from Liverpool to Manchester in 40 minutes! being at the astonishing rate of 45 miles per hour, including time lost in stoppages and ascending the inclined plane.

During wet weather the engine wheels are found to adhere better to the rails than in dry weather, but if the rails are only damp or greasy, the wheels have a tendency to slide instead of rolling, and the carriages then have considerable difficulty in dragging along their loads. According to Mr. Booth's experiments, the adhesion of the wheels, in the most unfavorable state of the rails, is equal to 1/10th of the weight supported by them. During frost, a loaded wagon is generally placed before the engine to rub off any ice or hoarfrost that may adhere to the rails. After the steam is thrown off, and the brake or drag applied, in order to stop the trains, the time that elapses before they cease to move is generally from 40 to 60 seconds, but this depends entirely on the state of the rails, and the rate at which the carriages are moving.

There are generally eight or ten engines at work on the line, each of which makes 4 trips a day between Liverpool and Manchester, and on coming in at night the steam is blown off, and the machinery is thoroughly cleaned. At each end of the line the company have a depot, consisting of sheds, where the engines are repaired at the sight of an overseer or manager, and it is not a



little remarkable that 200 men are employed in keeping these engines in good order. The carriages are daily in want of some small repair, but they generally run about eighteen months before receiving a renewal, or thorough repair. The "Vulcan," a train engine, ran no less than 47,000 miles before it required to be taken into the shed for repairs, and the "Fire Fly" ran 50,000 miles. I have never seen any correct account of the work done by the several engines, or the repairs made on them. According, however, to the Railway Company's reports, the expenditure connected with locomotive power, exclusively of outlay for new engines, amounts to the extraordinary sum of about £28,000 per annum. On visiting the Stockton and Darlington Railway in the month of November last, I learned through the kindness of Messrs. Pearse, the promoters of this undertaking, that the engines running on that railway very seldom required repair; although in their construction, and the workmanship employed on them, they fall greatly short of those in use on the Liverpool and Manchester line. But at Darlington the rate of travelling is only 8 miles per hour, while at Liverpool 25 miles per hour is the usual speed; and hence we are fully warranted in supposing that the great wear and tear on the Liverpool and Manchester Railway may be chiefly attributed to the speed at which the engines are worked. Notwithstanding the smooth surface on which the carriages run, and application of springs, the tremor or shaking of the engines is very considerable, and is much increased with the speed. When moving at the rate of 25 or 30 miles per hour, the tremulous motion of the engine becomes quite alarming to those unaccustomed to it.

The luggage engines perform a great deal of work, and generally bring in 20 loaded wagons, averaging  $3\frac{1}{2}$  tons each. With this load they move easily at the rate of 20 miles per hour on every part of the Railway, excepting at Whiston and Sutton inclined planes, where the effect of gravity reduces their power 2-3ds, and forces them to bring their load to the summit at 2, and sometimes 3 trips, although assisted by the bank engines. They nevertheless make the journey between Liverpool and Manchester in about two hours. Upon one occasion, I saw the "Fury" engine with 12 loaded wagons, averaging  $3\frac{1}{2}$  tons each, ascend the Whiston inclined plane without the aid of the bank engine; its speed on the level was about 30 miles per hour, and when it reached the top of the incline, the velocity was diminished to about 2 or 2 $\frac{1}{2}$  miles per hour. This inclined plane is a mile and a half in length, and its rise is at the rate of 1 in 96.

Some idea may be formed of the load these engines are capable of taking, and of the rate of charges and expense of fuel, from the fact, that, during my stay in Liverpool, the "Atlas" engine brought in 47 wagons, being a load of 160 tons, for which the Company's charge would be £70 sterling, or at the rate of £1.10s. per wagon. It is, I believe, calculated that the combustion of half a pound of coke will produce steam sufficient to carry 1 ton 1 mile, at the rate of travelling adopted on this Railway, so that the conveyance of 1 ton from Liverpool to Manchester requires about 15 lbs. of coke, the cost of which is about 2d. The expense, therefore, of fuel for bringing 160 from Manchester to Liverpool, according to this calculation, may be taken at £1.10s. while the Company's charge for carriage is £70, so that the chief expenditure, after the interest of the first cost of the Railway, is

in keeping the engines and Railway in repair.

The second class train makes the journey in two hours, and has generally eight or ten carriages, which are open, and each seated for twenty-four persons. There are nineteen stations on the line where this train regularly stops, for the accommodation of passengers; and at each station there is a watchman, who makes signals if he sees cause for stopping the train. The signals are made during the day by red flags, and by lights after sunset.

The first class train makes only one stoppage, at Newton, to take in fuel and water, and performs the journey of thirty miles in an hour and a half. The coaches in this train are framed and covered like handsome road carriages, and are seated for eighteen passengers, with the exception of the railway mail coach, which goes at the end of the first class train, and is seated for twelve persons. The charge for passengers from Liverpool to Manchester by the first class train in the mail is 6s. 6d., and in the other carriages 5s. 6d. In the second class train, the fare, by the close carriages, 5s. 6d., and by the open ones 4s. The weight of luggage allowed to each passenger is 60 lbs., beyond which a charge is made at the rate of 3s. per cwt. The charge for conveying a four-wheeled road carriage is 20s., and a two-wheeled carriage 15s. On horse is charged 10s., two horses 18s., and three horses 22s. About one thousand and twenty passengers, and six hundred and forty tons of goods, are daily transported along the railway.

Each engine carries two men, an engineer and a fireman, who have respectively 5s. and 2s. 6d. a day. As a check upon their regularity, a fine of 2s. 6d. is imposed on the engineer for every fifteen minutes he arrives before his time. There is a brakeman with the luggage train, and the trains for passengers carry two guards.

The occurrence of accident is not so frequent as might be imagined, as the great weight of the carriages prevents them from easily starting off the rails; and so great is the momentum acquired by these heavy loads moving with such rapidity, that they easily pass over considerable obstacles. Even in those melancholy accidents where loss of life has been sustained, the bodies of the unfortunate sufferers, though run over by the wheels, have caused little irregularity in the motion, and the passengers in the carriages have not been sensible that any impediment has been encountered on the road. For the prevention of accident, some arrangements have been adopted, by which the north rails are exclusively allotted for engines going towards Liverpool.

The railway business is conducted by twelve directors, who give a half-yearly report on the income and expenditure; and a dividend of nine per cent. per annum has been declared for payment. At present, the railway is in use only during the day; but by conveying goods during the night, provision may be made for a great increase of traffic without incurring expense in the execution of new works.

Pittsburgh, Feb. 21, 1835.

The following report on the subject of a geological survey of this State ought to be generally published in the papers throughout the States. It abounds with sound, liberal, and enlightened views, and does honor to the committee who prepared it. In a word, it is full of truths of interesting

import, accurately and forcibly expressed.

The memorial which drew forth this report proceeded from the American Institute of this city—an association of gentlemen unsparing in their exertions to promote science, as well as the useful arts. It is much to be regretted that their memorial for the construction of the Rochester and Olean Canal had not been favored with a sprinkling of the same intelligence and liberality.

*Report of the Select Committee on the Memorial of the American Institute.*

Mr. Clinch, from the select committee to which was referred the memorial of the American Institute of the city of New-York, praying for a geological survey of the State, reported:

The memorialists do not enter upon any detailed examination of the subject which they have presented for our consideration, but allude in general terms to the acknowledged obligations of government to advance the cause of science and of learning; and strenuously urge that efficient measures ought to be taken to promote the progress of this important branch of knowledge, inseparably connected as it is with a thorough disclosure of the internal resources of the State, and with the industry and enterprize of its citizens.

They remark that New-York has yet taken no steps towards an examination of the geological features of its extensive territory; and they forcibly present to the attention of the Legislature the example of our sister States of Maryland, Tennessee, New-Jersey, Massachusetts, and Virginia, in all of which scientific researches of this character have been instituted by law, and have resulted beneficially to the various interests in which the population are engaged, and with signal advantage to the promotion of the cause of science, particularly as regards the latter service, in the course pursued by Massachusetts; an enlarged edition of the geological researches of which State has been published by legislative authority, and presents a noble evidence of the liberal and enlightened policy of the government of that Commonwealth.

The memorialists further urge that the geology and mineralogy of our extended territory are prominent objects of useful and interesting inquiry, both in an economical and scientific point of view; and that a knowledge of the localities and extent of the different formations of quarries and minerals can only be acquired by the scientific researches of competent persons, the labor of which is altogether too onerous to be undertaken by individual enterprize, and involves an expenditure of time and money in the public service which can not be reasonably expected from the scientific institutions of the State, which have been established by private exertions and with limited means.

The memorialists conclude with suggesting the propriety of employing a commission, to be composed of three or four competent persons, under the public authority of the State, to make a complete geological and mineralogical survey of the whole of our territory; and to present the result of their labor and researches in a report to the Legislature, at as early a period as may be consistent with the full and just discharge of the task assigned to them.

In the last annual message of Governor Clinton, (and repeatedly in former messages,) legislative encouragement is earnestly recommended to be given to mineralogical



researches throughout the State, with a view to the discovery of coal, which, from various geological indications, it is asserted must exist within our limits. The importance of these investigations is dwelt upon with apparent anxiety, and made manifest by all the cogency of argument and perspicuous array of facts which usually accompanied the recommendation of measures of public policy from the same enlightened source. A select committee, to which this part of the message was referred, made an elaborate and learned report upon the subject, confirming by unerring evidences the fact of the existence of bituminous coal and other mines of mineral wealth in various sections of the State; and clearly demonstrating that there is a general uniformity and analogical connection prevailing in Europe and in this country with regard to the fossil and other geological formations, as yet known to both.

During the session of the Legislature of 1829, a memorial was presented from the Lyceum of Natural History in the city of New-York, praying for an inquiry into the expediency of instituting a search for bituminous coal within this State. This memorial was accompanied with a resolution recommendatory from the Common Council of that city. The select committee to which the memorial and resolution were referred, reported favorably and at length upon the subject. That committee ardently endeavored to impress upon the Legislature their own conviction that this department of science peculiarly deserves the encouragement of the government, inasmuch as the beneficial results of its pursuits, whatever degree of success may attend them, cannot be otherwise than shared by the whole community—opening new sources of power and profit to the State, through the genius, and industry, and enterprise of the people. It is well remarked by that committee, in reference to the particular branch of one subject to which their attention was directed, that Legislative authority and munificence would be nobly employed in giving encouragement to discoveries in that department of science which would find their way to every man's fire-side.

The reports of the committees above alluded to, dwell with great fluency upon the utility and necessity of instituting these examinations into the "bowels of the earth;" and eloquently appeal to the intelligence and patriotism of the Legislature for unprejudiced measures and liberal appropriations to accomplish such objects. (See Assembly Journal, 1828, 1829.)

Knowledge is power! If this be true in its general sense, how peculiarly forcible is its application to the scheme of political economy pursued by the government of every Commonwealth? The power to be derived from a thorough manifestation of the sources of industry within its own sphere of control, is a pre-requisite to the perfection of every system devised for the well-being of the governed. Tested by this sentiment, the power possessed by the State of New-York is yet in its infancy. The knowledge to be acquired from a complete geological survey of our territory cannot fail to have the happiest influence upon our increasing prosperity; and as a director of the energies of our inventive and spirited people; as furnishing a varied choice of pursuits to the indolent and capricious; or, to the partially incapable portion of a population, composed, and likely to be forever composed in some degree, of the adventurous and unfortunate of all nations; it will be an unceasing source of wealth to the State,

and of grace to the condition of its dense and variously characterized community.

It would be as difficult as it is believed to be unnecessary, to enumerate all the benefits which would accrue from a faithful geological survey of the State of New-York. Your committee are satisfied that legislative patronage cannot be extended to any one department of science that will conduce more decidedly to the individual interests of every inhabitant within our borders. Every man who cultivates an acre of land amongst us, must find himself wiser and wealthier in the sequel of an investigation, which will teach him where to direct his search for useful and valuable, though secret products of his land, and prevent his continuing to throw away time and money in fruitless exertions, which a proper knowledge previously obtained would have taught him never to have commenced.

The States of North Carolina, South Carolina and Pennsylvania, in addition to those already enumerated, have made legislative provisions for geological surveys within their respective territories; the results of all of which, as far as is known to your committee, have invariably been of a useful and valuable character.

Unerring data, acquired by the exertions of scientific men of both hemispheres, have satisfied them that the hidden riches of our own soil are as valuable and various as those already discovered in Europe.

We are as yet thoroughly acquainted with but a small portion of our salt district; and the bringing to light of vast beds of bituminous and anthracite coal, which are reasonably conjectured to exist in the neighborhood of our navigable streams, would in itself be a popular source of pride and profit to the State.

The geological features of our soil present in many particulars a very extraordinary aspect. The incongruous mass of materials, and the multitudinous variety of forms and things, of which the hills and valleys of a portion of our State are composed, were most graphically exhibited to our view by an eloquent member of this House, in a recent debate on the subject of internal improvement. It was ably and admirably said on that occasion, that this section of the State suggested to the mind of the intelligent observer, the idea of a "DEPOSITORY OF MATERIALS OUT OF WHICH TO MAKE WORLDS!" What mines of wealth may not this combined compression of nature's works now nurture in its bosom? A speculative and inquiring spirit may pursue this thought to the most brilliant conclusion, and yet not overstep the modesty of reality; for, as far as they are known, the certainties of science and the images of the imagination, in the contemplation of this subject, present the same picture to the mind.

It may not perhaps be available to inquire what influence an ample knowledge of the geological features of our whole State would have had upon the location of our great public works; but its important bearing upon the route of canals and railroads hereafter to be constructed, will be evident to all. The facility of excavating, the probable amount and materials of transportation, the economy and feasibility of the proposed works, and the proper character of them, are all subjects that will be most effectually illustrated by a general geological and mineralogical survey.

Another valuable consideration is, the beneficial effect which an intimate knowledge of our internal resources will exercise, in solving the doubts of those who ex-

perience difficulty in deciding upon the expediency of establishing the several prominent public improvements now under discussion.

But the most impressive view in which this subject presents itself to the minds of your committee is, that the principle of self protection, which justly receives so large a share of consideration in determining the public policy of the State, would be materially enlightened by the data derived from the proposed survey.

The question of defending ourselves against the internal improvements of our neighbors, by constructing works which will command the trade of adjacent territories, while it would lose none of its propriety, might cease to be a matter of paramount importance, in consequence of the disclosure of these fountains of industry and wealth now hid in darkness within our own soil.

Taking these general views of the subject, your committee are of opinion that the suggestions of the memorialists are in accordance with the soundest policy and best interests of the State; but your committee are not prepared to decide upon the best means of carrying these suggestions into effect.

Considering the late period of the session, they are willing to give the subject a progressive action during the recess of the Legislature, and have no objection to such disposition of it as will bring to its support the fostering care of an accomplished guardian; attract towards it that degree of general attention to which its importance is entitled; and give it the advantage of the volunteer aids of scientific men in all parts of the State.

Your committee have therefore unanimously agreed to propose the following resolution:

Resolved, That the Secretary of State be requested to report to the Legislature, at its next session, the most expedient method of obtaining a complete geological survey of the State, which shall furnish a scientific and perfect account of its rocks, soils and minerals, and of their localities, a list of all its mineralogical, botanical and zoological productions, and provide for procuring and preserving specimens of the same, together with an estimate of the expenses which may attend the prosecution of the design, and of the cost of publication of an edition of three thousand copies of the report, drawings, and geological map, of its results.

**SUSPENSION BRIDGES.**—At a meeting of the Clinton Suspension Bridge Committee last week, Mr. West's report on the principle of wire suspension bridges was read and approved. This gentleman has recently been examining the suspension bridges of France and Switzerland, most of which are of wire. He stated that previously to the opening of the Fribourg bridge, in October last, proof was made of its capability of sustaining great weight, by placing 36 horses, 14 pieces of artillery, and 300 people upon it at one time, which did not cause the slightest derangement in the structure. Upon the occasion of opening the bridge, a grand procession of the clergy and municipal authorities took place, when no less than 1,800 persons, estimated at 90 tons, were at once on the bridge. The two largest bridges over the Soane, at Lyons, are of wire, and are crossed by the heavy French diligences, weighing 5,000 lbs. each, and allowed by law to carry 6,000 more.—[English paper.]



[From the Journal of the Franklin Institute]

*Report to the Board of Directors of  
Bridges, Public Roads, and Mines,  
upon the Use of Heated Air in the Iron  
Works of Scotland and England. By  
M. DUFRÉNOY, Engineer of Mines.  
Paris, 1884.*

(Continued from our last number.)

**CALDER IRON WORKS.**

These works are three miles from Glasgow, on the Edinburgh Road; the hot air blast has been used at them for three years past; two of the furnaces are fed by an apparatus like that at the Clyde Works, but at the other two the air is heated by means of a system of small tubes, represented in figures 6, 7, 8, and 9.

This apparatus is composed of two large horizontal tubes, *a c*, and *a' c'*, six feet long, nine inches in diameter in the clear, and one inch thick. Nine small tubes, six inches in diameter outside, and three inches inside, doubling upon each other like syphons, are placed vertically upon the pipes, *a c*, and *a' c'*, and fastened by being driven tight into the throat, *d*. This system of tubes is placed in a rectangular furnace, ten feet long, three feet wide, and twelve or fifteen feet high. To prevent injury to the joints, care is taken to protect them from the direct action of the fire. The joint, *m*, *n*, of the large pipes, is placed outside of the furnace, and the connexions of the small pipes with the large are shielded by fire brick. The flame is carried through the furnace by the longitudinal flue, *g*, *h*, passing the whole length; it is then spread among the tubes which it envelopes, gaining the chimney by the openings, *o*, *o*, *o*.

The temperature of the air is raised by this apparatus to 612° Fahr., as at the Clyde Works; the consumption of coal is 7 cwt. of coal per ton of iron produced.

This apparatus appears to be preferable to that of the Clyde. It takes less room: the bends in the small tubes, it is true, increase the friction of the air passing through them, but this circumstance appears to have but little influence on its motion. The power expended by the blowing engine is not greater than that at the Clyde Works, and the pressure of the air is two pounds and three quarters per square inch.

The expense of construction is quite small. The greatest part of it is formed of cast iron, which can be replaced at the works in case of accident. The cost of construction is estimated at about \$150, requiring about seven tons of castings—say about one and a half tons for the large pipes, and five and a half tons for the small tubes. By estimating the iron cast into pipes, at \$24 per ton, which is the average cost at the works using coal, the expense of each apparatus will be about as follows: Masonry, \$100; earthen parts of the furnace, \$60; casting pipes, \$168; total, \$328.

The expense will then be about \$656 for each smelting furnace. At Calder they estimate the cost at about \$168 to each tonne. The apparatus at the Clyde

is much more expensive; the quantity of iron required is seventeen or eighteen tons, and the masonry twelve times as much as at the Calder Works.

The working of the furnaces present the same circumstances as those of the Clyde, and it is useless to repeat them; but to exhibit the progress of the introduction of hot air, we shall indicate

### 1. The consumption and products of

the Calder Furnace, worked with cold air and coke.

2. The expenses and products of the same furnace, fed with air heated to 300° Fahr., also consuming coke.

3. The same results from the use of hot air and crude coal, during the month of July last.

The results which follow are extracted from the books of the establishment.

*Consumption and Produce of Furnace No. 3, in 1828, by the Use of the Cold Blast and of Coke.*

	Coke.	Ore roasted.	Flux.	Cast Metal.						Total.
	t. c. q.	t. c. q.	t. c. q.	No. 1.	No. 2.	No. 3.	t. c.	t. c.	t. c.	t. c.
From 6th Jan. to 3d Feb.....	550 2 0	276 8 0	105 3 1	95 4	39 1	20 3	154 8	135 8	135 8	135 8
From 3d Feb. to 2d March.....	545 1 0	274 5 0	101 0 1	100 1	34 2	18 2	133 5	133 5	133 5	133 5
From 2d March to 30th do.....	575 0 1	295 6 1	108 0 0	106 6	44 3	15 14	166 3	166 3	166 3	166 3
Loss of Coal in coking, 55 per cent.	1670 3 1	845 19 1	314 3 1	301 11	117 6	53 19	472 16	472 16	472 16	472 16
Coal.....	2041 6 3	563 18 3	Loss of Ore by roasting, 40 per cent.							
Coal.....	3711 10 0	1409 18 0	Ore, crude—pressure of air, 31 lbs.							

*Consumption and Produce of Furnace No. 3, in 1831. Air heated to 300° Fahr. and Coke.*

	Coke.	Ore roasted.	Flux.	Metal.						Total.
				No. 1.		No. 2.		No. 3.		
	t. c.	t. c. q.	t. c. q.	t. c.	t. c.	t. c.	t. c.	t. c.	t. c.	
From Jan. 2 to 15.....	189 12	120 3 0	52 10 1	57 11	11 0	42 0	2 110 13			
From Jan. 16 to 30.....	204 3	130 6	64 7 0	46 7	0 0	27 0	73 7			
TOTAL.....	393 15	250 9 0	116 17 1	103 18	11	69 2	184 0			
Loss of Coal.....	481 5	166 19 1	Loss of ore—pressure of air, 3 1-10 lbs							
Coal.....	875 0	417 8 1	Ore, crude.							

*Consumption and Produce of Furnace No. 3 during twelve weeks in 1832 and 1833, by Heated Air and Crude Coal.*

[illegible]

By comparing these tables, we learn that for one ton of iron produced, the furnace No. 3 consumed as follows :

1828. *Cold Air and Coke.*

7075 of coke, corresponding to 15724 lbs. coal,	t.	c.	q.
or.....	7	17	0
Ore roasted, 3792 lbs., or.....	1	18	0
Ore crude, 5970 lbs., or.....	2	19	2
Flux, 1330 lbs., or.....	13	0	0

1881. *Air heated to 300° Fahr. and Coke.*

4279 of coke, corresponding to 9510 lbs., or...	4	15	0
Fuel for heating the apparatus, valued at.....		6	0
<b>Total</b>		<b>5</b>	<b>15</b>
Ore roasted, 2217 lbs., or.....	1	7	0
Ore crude, 4575 lbs., or.....	2	6	0
Flux, 1250 lbs., or.....	12	2	2

## 1833. Air heated to 612° Fahr. and Coal.

Coal crsds 4187 lbs., or.....	2	2	0
Fuel for heating the apparatus, valued at.....	8	0	0
		2	10
Ore roasted, 3735 lbs., or.....	1	17	0
Ore crsds, 6282 lbs., or.....	3	0	0
Fuel, 522 lbs., or.....	5	2	0

**Note.**—The consumption for the steam engine is not

The furnace has produced each twenty-four hours.

					t. cwt.
1828.	Metal,	11,238 lbs.,	or.....	5	12 1/2
1831.	"	13,143 "	or.....	6	13
1833.	"	16,498 "	or.....	8	4 1/2

The consumption of combustion has, therefore, diminished from 7 t. 17 cwt. to 2 t. 2 cwt., and the amount of flux from 13 cwt. per ton of iron in 1828, to 5½ cwt. in 1833. This diminution must be charged to the increased temperature in the furnace by the use of heated air. I will indicate at the close of this Report, the reasons which appear to me to account for this increase of temperature, the existence of which is certain, though we have not been able to measure it.

The quantity of air blast has been reduced from 3500 cubic feet per minute, to 2627 feet, the pressure being reduced from 3½ lbs. on the square inch, to 2½ lbs.

The expense of the fuel for heating the air varies from 7 to 8 cwt. per ton of iron.

The consumption for the blast engine remains the same, but as the yield of the furnace has advanced from 5 tons 12 cwt., to 8 tons 4 cwt., the expense, divided on each ton of iron, is reduced from 1 ton 4 cwt., to 14 cwt.; the slack only is used for this purpose.

The consumption of ore has varied much, but, as the scoria never contains more than from .02 to .015 of iron, this



difference depends on the quality of the ore, according as the *Ball ironstone* (mine eu rognous), or *flat ironstone* (mine eu couche), is used.

At Calder, as in the Clyde Works, the daily production of iron has been increased in a great proportion; this circumstance operates powerfully on the price of fabrication, as will be seen by the following statement.

*Cost of making one ton of Pig Iron at the Calder Works.*

1832. Cold Air and Coke.		
t. cwt.		d. c.
7 17 1/2	coal for fusion, at 4s. 6d. per ton.....	8 50
1 4	coal for blast engine, at 1s. 8d. per ton..	48
2 19 1/2	crude ore, at 6s. per ton.....	4 25
	Expense of roasting, at 10s. per ton.....	40
13	flux, at 7s. per ton.....	1 09
	Labor, at 10s. per ton.....	2 40
	General expense, interest, &c.....	1 44
		18 76
1833. Air heated to 322° Fahr. and Crude Coal.		
t. cwt.		d. c.
2 2	at 5s. per ton.....	2 52
14	at 1s. 8d.....	28
8	for heating apparatus, at 1s. 8d.....	16
1 17	ore roasted, at 12s. per ton.....	5 33
5 1/2	flux.....	46
	Labor reduced in proportion to increase of yield.....	1 62
	General expense, interest, &c.....	1 01
		11 38

The blast engine employed at Calder is made with two cylinders, one over the other, with one shaft, so that the pistons of both are attached to the same beam, (*fige.*) The upper cylinder is fifty inches, and the lower cylinder seven feet, in diameter, each being seven feet long; the stroke of the piston, which is nine inches thick, is seven feet, and it makes sixteen strokes a minute.

#### MONKLAND IRON WORKS, NEAR AIRDRIE.

The heating apparatus used at this establishment is similar to that at Calder, being formed with two large pipes, and a number of small tubes, jointed in the large ones, the relative positions being changed.

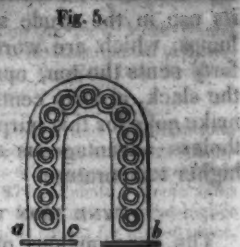
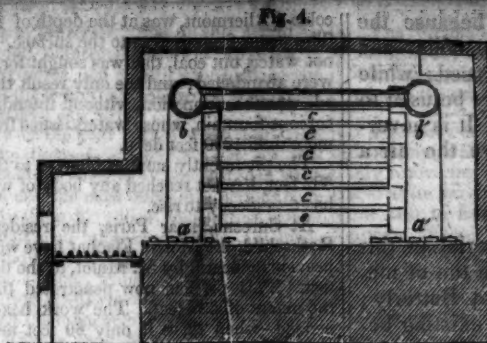
The two large pipes, *a b, a' b'*, (*figs.* 4 and 5,) are vertical, and framed as shown in the plate. The small tubes, *c c*, five feet long, which make the communication between them, are placed horizontal. This difference of position, and diminished length of the tubes, prevent the temperature of the air from being raised so high as at Clyde, or Calder.

At the time I visited Monkland, the air was heated to 450° Fahr., and coke was still in use for smelting.

The economy in fuel and flux obtained at these works, since the introduction of hot air, is nearly the same as at the Calder works, when the air at that furnace was heated to 300° Fahr., and coke still used in the furnace.

Before the adoption of the new plan, the Monkland works consumed from seven to eight tons of coal, for each ton of metal; since that time, there has been consumed 4 tons of coal for smelting; 6 cwt. of coal for hot air apparatus; 3 tons 5 cwt. crude ore; 10 cwt. flux.

The daily yield is now six tons; the pressure of the blast, two and three quarters of a pound.



The metal produced in the three works of which I have given the details, is, for the most part, intended for the foundry; the No. 3 iron alone is made into bar iron, and for this purpose is sold to the forges near Newcastle.

The pig metal, Nos. 1 and 2, though both destined for the foundries, are not employed indifferently.

The No. 1 iron is principally used for castings, which are to be worked as steam cylinders, &c., or for those requiring great strength. The No. 2 iron, though easily cut with a chisel, is nevertheless harder than the No. 1; it is employed, in preference, for cog wheels, and work requiring considerable hardness.

Besides the works of which I have treated, three others exist in Scotland, using the hot air blast; the results obtained in these establishments, by the adoption of the new plan, being similar to those cited, it appears useless to enter into details respecting them.

#### IRON WORKS IN THE ENVIRONS OF NEWCASTLE-ON-TYNE.

In the coal basin of Northumberland, the largest and richest in the kingdom, which furnishes almost all the fuel used in London, and the vicinity of the Thames, there are but two iron-works.

1st. The *Butterly Iron Works*, six miles from Newcastle, on the London road—the other called the *Tyne Iron Works*, on the banks of the Tyne, three miles from Newcastle. This region does not abound in good iron ore, and the proprietors have been unable, after the most minute search, to procure mineral enough to supply these two works; but their position on the banks of the Tyne enables them, in spite of these unfavorable circumstances, to draw their supplies from Lancashire and Cornwall, at a cheaper rate than they can be obtained, for the most part, in our iron works.

Both these works have used the heated air for a year past.

The *Butterly works*, constructed but three years since, contain two furnaces forty-five feet high, four reverberatory furnaces, and several cupolas; all the iron made is intended for castings.

The results given by the apparatus for heating the air, are not sufficiently important to warrant a particular description and plate. The apparatus consists merely of a tube, returned five times upon itself at right angles, and disposed so that the cross section presents five circles, of which four have for the centres the angles

of a rectangular parallelogram, and the fifth the point where the two diagonals intersect.

The tubes are placed horizontally, and are connected by bolts and nuts through lugs on the outside.

The interior diameter of these pipes is fourteen inches, and the metal one and a half inches thick; the length of the heated part is fifty feet, and the pipe is placed in a rectangular furnace, a little shorter than it, so that the joints and angles may not be exposed to the action of the fire.

The expenditure in fuel of this apparatus is about six hundred weight to the ton of iron produced. The pressure of the air is one and a half pound, being the same as before the introduction of the hot air. The velocity of the blast is a little less.

The charges of the furnace are as follows:

700 lbs. coke, (this coal gives 45 per cent. of coke;) 650 lbs. mineral roasted, being a mixture of equal parts of ore, (*minerai houiller*), and the red oxide of iron from Lancashire; 400 lbs. flux.

From the register, it appears that there were made, in furnace No. 1, July 10, 40 charges; July 11, 42 ditto; July 12, 38 ditto; or an average of 40.

The same furnace produced, in these three days, 23 tons 11 cwt. of metal, or a daily average of 7 tons 17 cwt.

By taking this data, we find that, to make one ton of iron at *Butterly*, they consume 4 tons of coal for fusion; 6 cwt. coal in lumps to heat the air; 1 ton 13 cwt. ore roasted; 1 ton flux.

The quantity of flux employed is very considerable, because it is much charged with water, being a marly chalk, brought from the banks of the Thames by the coal ships.

The mixture of ore, when roasted, contains 60 per cent. of iron.

To appreciate the saving which has resulted at the *Butterly works*, from the use of hot air, it is necessary to know exactly the consumption for a ton of iron, before the introduction of the plan. I have not been able to procure documents which would furnish this; but Mr. J. Hunt, the manager, assured me that the expenditure was seven tons of coal.

If we compare these results with those obtained in Scotland, we shall find that the consumption at *Butterly* corresponds nearly with that at Calder in 1830, when the temperature of the air was raised to 300° Fahr. and coke was still burned.

At Newcastle, the price of coal forbids



its use in the crude state, because the lumps, which are worth one dollar and forty cents the ton, must be used; while the slack, at forty cents, may be used to make coke for this purpose. It is nevertheless advantageous to give the air a higher temperature.

#### TYNE IRON WORKS.

The consumptions of material in this work, for the production of a ton of metal, are nearly the same as at Butterly; but an important difference existing between these establishments is, that, at the Tyne works, a great portion of the pig metal is made into malleable iron. This iron, which is of a superior quality, is almost exclusively rolled into boiler plates. In the same furnaces, and with the same minerals, the two kinds of iron are made by varying the relative proportions of ore and coke.

Cupolas are also fed with heated air to great advantage, 225 pounds of coke being sufficient to melt a ton of metal.

The furnaces having been constructed since the adoption of the hot air plan, no comparisons in regard to economy could be instituted.

#### ENVIRONS OF MANCHESTER AND LIVERPOOL.

The Rant iron works, near Wrexham, in Flintshire—the Apdale, the Lancend, and the Silverdale works, near Newcastle-under-Line, Staffordshire—have adopted the hot air plan.

The apparatus used in these establishments are very like those represented at figures 7 and 8. At Apdale, precisely the same apparatus is used, and the results obtained since its introduction are almost identically the same as at Calder, the temperature of the air being raised to 600 or 612° Fahr.

The consumption of coal, formerly six tons to the ton of iron, is now reduced to three and a quarter tons. They still employ coke, the coal being sulphurous. The expense of the heating apparatus is 7 cwt. of coal to the ton of iron.

The quantity of flux is reduced in the same proportion. In July, when I visited Apdale, only one furnace was in blast, which had been five years at work, but only six months with heated air. Since that time, the yield of the furnace has been from six to seven tons per day; the iron produced being almost all No. 1; while before, the metal had been nearly equal parts of No. 2 and No. 3, the last being made into bar iron.

One work near Newcastle, belonging to Mr. Furnstone, has abandoned the use of the hot air blast. I should have endeavored to ascertain the cause of this, had I learned the fact in time to visit the works.

(To be continued.)

[From an Essay of M. Arago on Artesian Wells.]  
**Depths of the most remarkable Fountains which have been opened by the hand of man.**

We have already alluded to pits sunk by the Chinese to the depth of 1800 feet, in the province of Kin-ting-fou, by which they hoped to procure a supply of salt water; but as no water ascended the pits, we cannot rank them in the list of wells properly so called.

The seventh sheet of water, found near Saint Ni-

colas d'Almermont, was at the depth of 1030 feet.—The water from it rose to the surface. As it was not water, but coal, that was sought for, the works were abandoned; and the only result that remained, was the formation, without intending it, of a copious fountain, whose waters issued from a source more than 1000 feet deep.

The pit recently sunk at Geneva to the depth of 682 feet, has not reached any body of water which has a tendency to rise.

At Suresne, near Paris, the residence of M. Rothschild, the Messrs Flachet have worked a pit, previously begun by M. Mulo, to the depth of 663 feet. This pit has now penetrated the chalk to the extent of 537 feet. The work has been suspended, when there is only 60 feet more of the chalk formation remaining, upon penetrating which, there would be every prospect of finding water.—The desirableness of prosecuting the research is most apparent.

The fountain of Cheswick, in the Duke of Northumberland's park, projects its water about a yard above the surface of the soil, and comes from the depth of 582 feet.

The deepest fountain in the department of Pas de-Calais is situated between Béthune and Aire. Its waters project seven feet above the ground, and come from a depth of 461 feet.

The artesian well which affords such an abundant supply in the cavalry barracks of Tours, is fed by a body of water which M. Degoussé found at the depth 259 feet. The water of another well, which was finished in 1834, in the silk manufactory of M. Champoiseau, springs from a depth of 273 feet.

#### Concerning the Daily Issues from some of the Principal Fountains.

Belidor has already mentioned, in his Science de l'Ingénieur, a fountain which is situated in the monastery of Saint André, a couple of miles from Aire in Artois, the waters of which rise to the height of eleven feet above the ground-floors, and which furnishes nearly two tons of water per minute.

The well which Messrs. Fabre and Espérette have sunk, at Bages, near to Perpignan, in the property of M. Duvand, supplies 333 gallons per minute.

The well which M. Degoussé had sunk in the cavalry barracks at Tours, measured at six feet above the ground, furnishes 235 gallons per minute.

Of the many wells which exist in England, the one whence, according to my knowledge, there is the most abundant supply of water, is that in the copper manufactory of Merton, in Surrey; its issue amounts to 200 gallons a minute.

The artesian well of Rivesaltes, for which the inhabitants are so much indebted to Messrs. Fabre and Espérette, engineers, furnishes 176 gallons in the same time.

The well lately sunk near to Lillers, in the department of the Pas-du-Calais, with a depth of 140 feet, affords a supply of 155 gallons per minute.

#### Of Artesian Wells whose waters have been employed as Moving Powers.

At the village of Gouhem, near Béthune, four wells have been sunk in a meadow to the depth of 120 feet. The waters which issue from them are converted into the water-course of a flour-mill, and subserve other agricultural processes.

At Saint Pol, there is another mill, the only moving power of which is the water from five projecting fountains.

At Fontès, near Aire, the waters of ten such wells are made to turn the mill-stones of a large mill, as also to blow the bellows and beat the hammers of a nail manufactory.

At Tours, M. Degoussé has excavated a well, in the silk manufactory of M. Champoiseau, to the depth of 430 feet, which pours 287 gallons of water per minute into the troughs of a wheel of twenty-one feet diameter. This wheel works the looms of his manufactory.

At Tooting, near London, the fountain of an apothecary puts a wheel of four feet diameter in motion, and this sets a pump to work, which raises water to the top of a house three stories high.

#### Of the advantage to which Industry, in various circumstances, has turned the Waters of Fountains.

On the present occasion we need not dilate on the benefits these waters confer on public health, nor on their use in irrigation, &c. &c. We shall only point out their application to a few purposes which are less generally known.

These springs have been put in requisition even

in countries where more common-courses are not infrequent. Their constant and high temperature permits them to be applied to the movement of machinery during the most severe winters, whether it be directly, when they are abundant, or in other cases, only as a means of washing away the ice, which is apt to stop the movements of the water wheels.

In Wurtemberg, M. Bruckman, by transmitting through metallic pipes, conveniently placed, a current of water, at a temperature of 54 deg. Fahr., which is derived from several natural springs, keeps up a temperature at 47 deg., in various manufactories where the external cold lowers the thermometer to zero. This is a simple imitation of a plan which has been long practised in the village of Claudes-Aiques, the results, however, are worthy of consideration.

Greenhouses also are in existence, in which the temperature is maintained very equally, by the effects of the constant circulation of a large quantity of water, derived from these sources.

During heavy rains, the work of paper-mills is often interrupted, on account of the impurity of the water. These forced stoppages come to an end, when the constant limpid supply of a projecting fountain can be employed.

In some localities the invariable pure waters of a steady temperature, proceeding from these springs, have been the means of establishing very lucrative artificial cress-plots. The beautiful growth of cresses in those parts of the beds of rivulets where the natural springs existed, has suggested this application. It is positively stated that the artificial cress plots of Erfurt yield not less than 12,000l. per annum.

The very fine lint which is intended for the manufacture of cambric, lawn, lace, &c. is steeped in the Département du Nord, with very particular care. In a single Commune, between Douai and Valenciennes, there are ten or a dozen ratting-pools, which are fed entirely by water from a projecting fountain. It has been thought that the purity of these waters, and the invariability of their temperature, by accelerating the gum-reins, preserve the valuable qualities of the filaments of the lint in the highest degree of perfection.

In fish ponds, the fish are apt to die during the winter, from the severity of the cold, and in summer from the heat. By turning the invariably temperate waters of an abundant artesian well into them, the extreme variations which the seasons induce are prevented. This experiment it is said, has entirely succeeded in the ponds of St. Gratien, near to Montmorenci.

*Sometimes Pits are sunk for the purpose of transmitting into the interior of the earth, water, retained at the surface by strata of impermeable clay or stone, and thereby rendering extensive districts mere morasses, unfit for cultivation.*

The pits by which descend into the interior of the earth those quantities of water which, without this expedient, remain on the surface, may be called *negative artesian wells*. Necessity, the mother of so many important inventions, early suggested to mankind the idea of imitating nature in this point.

The plain of Paluns, near Marseilles, used to be a great morass. It appeared impossible to drain it by the help of the common surface channels. King René, however, caused a great number of pits or drain-wells to be sunk, which are known in the Provençal language by the name of *embugs* (funnels). These pits transmitted, and now transmit, in the permeable strata situated at a certain depth, those waters which made the whole country a barren waste. It is positively stated that it is the waters taken down by these embugs of Paluns, which, after a subterranean course, form the projecting fountains of the port of Mion, near to Cassis.

The river Orbe, in the Jura, which descends from the lake of the Rousses, conveys into lake Joux much more water than evaporation removes from it. This latter lake, whence there issues no river, preserves, notwithstanding, a stated elevation which is nearly uniform. "It is," says Saussure, "because nature has provided for these waters subterranean issues, by which they are engulphed and disappear. \* \* \* As it is of the

\* It is the property of absorbing, of drinking up the surface waters, possessed by certain natural and artificial openings, which has given the names of *boit-tout*, of *betoirs* or *boitards*, to these drain-wells in certain districts.



greatest consequence for the inhabitants of this valley to preserve these natural drains, without which their arable lands and their habitations would be immediately overflowed; they preserve them with the greatest possible care; and when they perceive that they do not take off the water with sufficient velocity, they themselves open new ones. For this purpose, all that is necessary is to sink a pit fifteen or twenty feet, having a diameter of about 10 feet, in the thin and vertical strata, the summits of which appear on the surface. The name of *entonnoirs* (funnels) is given to these pits. \* \* \* It is," adds Saussure, "the waters absorbed by all these entonnoirs, that are observed to rise from the earth, and form a large spring, which is also called Orbe, at the distance of two miles below the southern extremity of the lake." In this passage of two miles, the absorbed waters descend 630 feet.

A manufacturer of potato starch at Villetaneuse, a small village about three miles from St. Denis, in the winter 1832-3, by means of a pit sunk to the depth of certain absorbing stratified beds, got rid of not less than 16,000 gallons of impure water per day; the stench from which had given rise to serious complaints, which probably would have compelled him to give up his establishment. After six months of daily absorption, nothing was found at the bottom of the pit except sand, and this has been uniformly the case from the first.

**Influence of Comets.**—"One of the most common effects attributed to these bodies is, an influence over the temperature of our seasons. It would be easy to expose such an error, by showing upon general physical principles, that there is no reason whatever why a comet should produce such an influence; but it will perhaps be more satisfactory to refute it by showing that it is not in conformity with observed facts. M. Arago has given a table, in which he has exhibited in one column the temperature of the weather at Paris for every year, from 1735 to 1801 inclusive; and in juxtaposition with these he has stated the number of comets which appeared, with their magnitude and general appearance. The result is, that no coincidence whatever, is observable between the temperatures or the number or appearance of the comets. For example, in 1737, although two comets appeared, the mean temperature was inferior to that of the preceding years, during which no comet appeared. The year 1765, in which no comet appeared, was hotter than the year 1766, when two comets appeared; the year 1775, when no comet appeared, was hotter than the year 1780, which was marked by the appearance of two comets; and the temperature was still lower in 1785, in which two comets appeared; while on the other hand the temperature of the year 1781 was greater, which was likewise marked by the appearance of two comets.

"This question, of the supposed connection between the temperature and the appearance of comets, has been completely sifted by M. Arago. He has given not only the general temperatures but also a table of the years of the greatest cold—of the years in which the Seine has been frozen over, and also of the years of the greatest heat—and he has shown that the corresponding appearances of comets have been varied without any connexion whatever with these vicissitudes of temperature.

"We should have hoped that the absurd influences attributed to comets would, at least in our times, have been confined to physical effects, in which the excuse of ignorance might be pleaded with a less sense of humiliation. But will it be believed that within a few years persons could be found among the better classes of society, and holding some literary and professional station—and in our own country too—who could attribute to the influence of comets every prevalent disease, local or general, by which, since the commencement of the Christian era, not the human race only was afflicted, but even the lower species of animals?

"The splendid comet of 1811 was, on the continent, considered as the immediate cause of the fine vintage of that year, and the produce was distinguished as the *wine of the comet*. But with us still more extraordinary effects were ascribed to that comet. In the 'Gentleman's Magazine' for 1818, we were told that its influence produced a mild winter, a moist spring, and a cold summer: that there was not sufficient sunshine to ripen the fruits of the earth; that, nevertheless (such was the cometic influence), the harvest was abundant, and some species of fruits, such as melons and figs, were not only plentiful, but of a delicious flavor; that wasps rarely appeared, and *flies became blind*,

and died early in the season; that, in the neighborhood of London, numerous instances occurred of women bearing twins, and it even happened, in one instance, that the wife of a shoemaker in Whitechapel had four children at a birth!

So recently as the year 1829, a work appeared upon epidemic diseases, by Mr. Forster, an English practitioner, in which it is asserted that, since the Christian era, the most unhealthy periods have been precisely those in which some great comet appeared; that such appearances were accompanied by earthquakes, volcanic eruptions, and atmospheric commotions, while no comet has been observed during healthy periods. Not contented, however, with the influences formerly attributed to comets, Mr. Forster, says M. Arago, has so extended, in his learned catalogue, the circle of imputed cometary influences, that there is scarcely any phenomenon which he does not lay to their charge. Hot seasons and cold, tempests, earthquakes, volcanic eruptions, hail, rain, and snow, floods and droughts, famines, clouds of midges and locusts, the plague, dysentery, the influenza, are all duly registered by Mr. Forster; and each affliction is assigned to its comet, whatever kingdom, city or village, the famine, pestilence, or other visitation, may have ravaged. In making thus, from year to year, a complete inventory of the misfortunes of this lower world, who would not have foreseen the impossibility of any comet approaching the earth, without finding some portion of its inhabitants suffering under some affliction; and who would not have granted at once, what Lubienietzki has written a large work to prove, that there never was a disaster without a comet, nor a comet without a disaster!

"Nevertheless, even the credulity and ingenuity of Mr. Forster were, in one or two cases, at fault, to discover corresponding afflictions for some of the most remarkable comets;—that of the year 1680, for example, which was not only one of the most brilliant of modern times, but the one which, of all others, approached nearest to the earth. The utmost delinquency with which he can charge this comet, was that of 'producing a cold winter, followed by a dry and warm summer, and of causing meteors in Germany.' To the comet of 1665, he ascribes the great plague of London; but he does not favor us with any reason why Edinburgh, Dublin, and Paris, not to mention various English towns and villages, were spared from its malign influence. The crowning absurdity, however, is the effect imputed to the comet of 1668. It appears, according to Mr. Forster, that the presence of this body made all the cats of Westphalia sick!"

**Locomotive Faculty of Plants.**—If a wet sponge be placed near a cucumber which is growing in a particular direction, it will change this direction and grow towards the sponge. A plane-tree, growing on the top of a wall, directed its roots down the side till they reached the ground, a distance of ten feet, in order to obtain the requisite nourishment of which it was deprived in its elevated situation. Thus plants appear, like wise and intelligent agents, to move towards their good, and to turn aside from those soils that are either injurious or afford but a scanty nutriment.—[Analyst.]

A newspaper is a voice that will be heard; for, if it fail in its desperate effort to have its own way, and produce a desired effect, it gives up attempting to make the mountain come to it, and very wisely sides with the collected mass. It is the mirror of public opinion; not the original or fundamental creator, but the munificent distributor. You may be heartily sick of politics, commerce, and the rest of the perverse present; but the newspaper claims your ear as its prey, and remorselessly pursues you for ever. Dart away by the mail to escape from some detested news of Bourbon or St. Nicholas, and take shipping at the Land's-end, "the paper" goes with you; hide yourself where you will, it finds you out; it is the bellman of your social existence, your shadow, your familiar; in short, there is no evading it. The first house we set our foot in, on arriving in Mexico in 1825—a time of war, trouble, and yellow fever, and before speculators and travellers had ventured their lives and fortunes to work mines, or write a book—there sat the Vice-Consul's clerk, blowing swift clouds from a much-excited cigar, behind a copy of the incorrigible omnipresent *Times* newspaper!—[Examine.]

The receipts for tolls on the New York canals during 30 days ending 14th inst. amounted to \$246,602; being \$51,580 more than had been received prior to the same date last year.

The stock of the Baltimore and Ohio Railroad Company, which has been for some time past steadily recovering from its depression, was yesterday sold at its par price of \$75 per share. Some sales are said to have been made at somewhat higher prices. There are various causes for this advance, among which we may briefly mention the appropriation by the State of two millions, for the completion of the canal to Cumberland—a work with which the railroad is now connected at two points, and will soon be at a third; the near completion of the Washington railroad, from the operations of which a handsome revenue is anticipated, and the completion, a month or two afterwards, of the Winchester Railroad, forming an extension of the Ohio road from Harper's Ferry thirty miles into the valley of Virginia. The understanding, also, that transfer books are about to be opened in Philadelphia and New York, has likewise contributed to enhance its value.—[Balt. Am. of May 16.]

Preparations are making at Brussels for opening the railroad from that city to Malines on May 1.—This is the first part of the line which is to run from Antwerp to the Prussian frontier. It is said that there are to be three steam-carriages differently laden. The first, which is called *La Fleche*, will contain the engineers and other persons who have been engaged in forming the road, and which will perform the passage in seventeen minutes. This will be followed by the Stephenson, impelling wagons filled with the Ministers, deputations from the Senate and Chamber of Representatives, and other officers of State; and in which will also be seated Mr. Stephenson, the English engineer, under whose direction the railroad has been formed. The third convoy of wagons will contain several hundreds of persons, drawn by an engine called the Elephant.

**Steamboat Improvements.**—It is said in a *Ham-burgh Paper*, that Lord Cochrane's scheme for propelling vessels by quicksilver, instead of steam, is objected to, at St. Petersburg, on scientific grounds. It is asserted, that, if the plan were proved to be advantageous, in a mechanical point of view, it would still be impracticable. In support of this opinion, it is remarked, that no piston of a steam engine is so exactly fitted to its cylinder, as to prevent the passage of steam, and that every lubricating matter which might be applied, would, in the heat of the boiling mercury, at 600 degrees of Fahrenheit, be partly evaporated, partly carbonized. Moreover, no lubricating substance exists which is capable of obstructing the passage of the vapor, and its ascent, from quicksilver, would be greater than the ascent of steam. The atmosphere of the vessel would, therefore, be completely loaded with mercurial effluvia, and thus rendered highly dangerous to the health of the crew and the passengers.

The re-construction of Athens progresses. The first plan, which reserved half the old city for the purposes of excavation, and kept it free from the building of houses, has been abandoned, as ruinous to the already too much distressed inhabitants.—Liberty has been granted to build every where: 2000 houses are already standing, and 200 more are in progress; whilst in 1832 they amounted to not more than 700 or 800.

**DEMAND FOR COCOONS.**—Judging from appearances, the demand for cocoons and reeled silk, the coming season, will exceed the supply in a thousand fold. The silk manufactories in Dedham, Mansfield, and this city, are depending principally upon the new crop for the raw material. The last year's crop is already exhausted, and we understand that scarcely a bale of foreign silk can be found in the commercial cities. Those, therefore, who raise a crop this season may depend on its being sought for by the manufacturers and at a very liberal price. We should not be surprised if they command \$4 a bushel. Such persons, therefore, as have foliage, will do well to make cocoons, if they are not prepared for reeling.—[N. E. Farmer.]



## NEW-YORK AMERICAN.

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## LITERARY NOTICES.

**THE SIEGE OF VIENNA; from the German of MOE. FICHLER. Philadelphia, KEY & BIDDLE.**—We have not had leisure to look into this volume, —and only mention it now among the new publications, lest it should pass away without any review.

**OUTRE-MER, a pilgrimage beyond the sea: 2 vols 12mo. New York, HARPER & BROTHERS.**—The rambling, agreeable, scholarlike, meditations, comprised in these two handsomely printed volumes, appeared originally in numbers, and have been from time to time noticed in our columns.—Collected together, they make two volumes of agreeable reading; they are full of a gentle spirit and gentle influences.

**HISTORY OF THE REFORMED RELIGION IN FRANCE: by the Rev. E. SMEDLEY, M. A. 3 vols. making vols. vii, viii, and ix, of the Theological Library, published by HARPER & BROTHERS.**—It is a melancholy consideration, that the history of religion, in all countries, is a history of persecutions, blood, and crime. The religion of the gospel, has not escaped its full share of these accompaniments of human infirmity, and headlong passions. Nor has any sect, by which its precepts of "peace on earth, and good will to men," have been preached, been altogether free from the fierce spirit of intolerance and oppression.

In France, especially, the Reformed religion has from the beginning, struggled against fire and sword; against relentless power, exercised with all the cold atrocity of combined religious and political fanaticism—and to this day even—under the rule of a citizen king, and popular institutions, it is not on a level in consideration or influence, with the Catholic faith.

The history which Mr. Smedley has written, appears to us, elaborate, full of research, not partial, and conveyed in a very pleasing style. We make at random, an extract from vol. 1. It relates the cold-blooded murder of the Prince of Condé, the Huguenot leader, after the disastrous battle of Jarnac.

It was not till the following March that any decisive military operation took place, and the two armies then met on the banks of the Charente.—The Duke of Anjou had been largely reinforced, and, aware that Condé was awaiting a powerful detachment of German auxiliaries, he determined to anticipate its arrival by an immediate attack. For that purpose it was necessary that the Charente should be passed; but of its two bridges, one at Jarnac was in possession of the Huguenots; the other at Chateaufort had been partially destroyed. The remains of the latter, however, being inadequately guarded, were repaired during the night, and crossed by the royalists on the morning of the 13th of March, before the admiral, who commanded the Huguenot vanguard, could assemble his division, which were scattered widely over the neighborhood. His intention, when he learned the advance of the royalists, was to fall back on the village of Bassac; but the tardy movements of some of his corps brought on a skirmish with his rear, which soon increased to a general battle.—Bassac was stoutly defended; but the royalists, who at first were driven back with much loss, at length carried and maintained it. When this reverse was announced to Condé, who being posted at some short distance had not hitherto been engaged, the brave prince was ill-circumstanced to afford assistance. In consequence of some previous hurt, he had entered the field with his arm supported in a sling, and as he rode along his lines, a severe kick from a mettlesome horse belonging to the Comte de la Rochefoucauld shattered one of his legs in his boot. Conceiving all sense of pain, and without changing the cadence of his tone and manner, he took this opportunity of inculcating a military lesson. "Gentlemen," he said, "bear in mind that fiery horses do more harm than good in action; and that it is but a silly vanity to pique ourselves on their management, and so to distract that at-

tention which ought to be directed altogether on the enemy—you may here see an unlucky proof of my doctrine, which however will not hinder me from fighting." Then waving his sword, he added, with greater fervor, "Nobles of France, know that the Prince of Condé, with a broken leg and his arm in a scarf, has yet courage to give battle." After these words he rode briskly to the admiral's assistance; and charging with scarcely three hundred men at arms, he found himself unexpectedly opposed to the main body of the royalists. Surrounded, his horse killed under him, and himself disabled by his recent hurts, he beckoned two gentlemen of the enemy whom he recognised: and having surrendered his sword and received their faith for his security, he was raised from the ground, and seated under a tree. Almost at the same moment the Baron de Montesquieu, a Gascon gentleman and captain of the Swiss guards of the Duke of Anjou, rode up to the group, and asked who was the prisoner? Upon hearing that it was the Prince of Condé, he exclaimed with vehemence, "Sdeath, kill him, kill him!" and approaching closely behind his back, discharged a pistol through his head, by which he was instantly despatched.

There is too much reason to believe that this most atrocious and cold-blooded murder would never have been perpetrated had it not been well known that it would be approved by the Duke of Anjou. Young as was that prince (he had scarcely yet attained his eighteenth year), the seeds of those evil passions which afterwards rendered him the most detestable of his odious race, had already struck deep root in his bosom, and one among the most prolific of them was revenge. He was jealous of Condé's popular qualities, and apprehensive of his rivalry. There can be little doubt, even after rejecting the improbable details preserved by Brantôme, that he had found in him a competitor for the highest military command; and we may attach full credit to another portion of that garrulous anecdote-monger's narrative, in which he proceeds to state that the Duke of Anjou had consented to peace solely for the purpose of entrapping the Prince of Condé, whom he hated with a hatred to describe which the English language has not an expression sufficiently strong, although we should say even unto death. "It was not likely to be otherwise," continues Brantôme, remarking on the savage and treacherous conduct of Montesquieu, "for the prince, as I well knew, had been recommended to many of the favorites of Monsieur, on account of the hatred borne against him from the day which I have mentioned; and assuredly there is nothing which a great man abominates so much as another great man who is equal; unless it be one who is not so, and who yet endeavors to raise himself to equality."

The ungenerous treatment which the remains of the fallen prince received, corroborates the suspicion that his assassination may be ultimately charged on the Duke of Anjou. "Monsieur," says Brantôme again, "was not at all displeased, but overjoyed, and wished to see his enemy's body after the conclusion of the battle. More out of insult than for any other other reason, it was thrown across an old sea ass that happened to be at hand; carried to Jarnac with the legs and arms dangling on either side of the beast, and placed in a lower room under the chamber then occupied by the duke, and on the day before by the prince himself."—After having been thus brutally exhibited as a spectacle to the whole army, the body was in the end delivered to Condé's brother-in-law, the Duke of Longueville, and buried by the Prince of Bearne at Vendôme.

The next extract illustrates very strikingly the remark, made above, of the atrocious nature of fanaticism. Here the young Duke of Anjou, the king of France Charles IX, and the Pope, are seen exciting each other's zeal, to exterminate without remorse, and in the name, and for the sake, of religion, millions of their Christian fellow creatures.

The exultation of the youthful conqueror was boundless; and but for the discreet suggestion of one of his confidential officers, that he would thus accredit the rumor which imputed Condé's death to his express orders, he would have ordered a chapel to mark the spot on which the prince had fallen. When the intelligence of the victory was conveyed to Metz, the temporary residence of the court, great joy was manifested also in that city. On

the arrival of the courier at midnight, Charles arose from his couch to receive him, and proceeded immediately to the cathedral to celebrate a *Te Deum*. He then appointed a solemn service of thanksgiving throughout the kingdom; notified his success to all the crowned heads his allies; and laid the captured standards at the feet of the Pope.—Pius V. was loud in his acknowledgments, and addressed letters of congratulation in return to the chief personages of the French court. "When I received your most welcome messenger, my beloved son," were his words to the king, "announcing the victory gained by God's assistance over his enemies and those of the church, your rebellious subjects; and the death of the source of all these troubles and seditions, the leader of the heretic army; raising my hands to Heaven, I gave thanks to the Almighty with all holiness of heart, for that He had vouchsafed you success, and had graciously poured out upon us also the riches of His loving kindness. But in proportion as God has dealt thus mercifully, so ought you with greater diligence and strenuousness to employ this opportunity, that you may follow up and destroy the remnant of the enemy; that you may utterly exterminate all the roots, and even the offshoots from the roots, of that so great and so confirmed an evil. If indeed they be not altogether eradicated, they will spring up again in quarters the least expected, as has often occurred before." Then, especially recommending the military occupation of Navarre, he urged Charles by the strongest exhortations to take from the common enemy all power of rising again. "This," he said, "will be best compassed, if you determine that no respect for human things or persons shall tempt you to spare the foes of God, by whom neither God nor yourself has ever yet been spared. You have indeed no other means of appeasing God, except by avenging most severely and with due punishment the injuries which He has endured from the most wicked of mankind; and to that effect the example of Saul and the Amalekites was then propounded and applied. Similar incitements to persecution were repeated in a second letter, written about a fortnight afterward, in which the king was assured that tranquillity could be obtained for France by no other means than by insisting on unity of religious faith. "To procure that unity, under God's assistance, it is requisite that your majesty should proceed against God's enemies and your own, by just pains and penalties, exercising with severity the fullest rigor of the law. For if any motives should induce you (which we are far, however, from suspecting) to delay pursuit and vengeance in those matters which give offence to God, you will deservedly provoke His long suffering to anger.—It is your duty to be deaf to every prayer, to reject every claim of consanguinity and kindred, to manifest yourself inexorable to every voice which may dare to petition for the most impious of men; and to that holy task, as it becomes our pastoral office and our paternal affection, well knowing that you are inclined to undertake it, we nevertheless think it fitting to stimulate you by this fatherly admonition."

Duplicates of these slaughter-breathing letters, with a few necessary variations of address, were at the same time transmitted to Catherine; and a hint was added that the Pope had heard of applications for the release of some of the heretic prisoners without punishment; a rumor which he confidentially trusted the queen would be able to contradict. To the Duke of Anjou, Pius wrote in terms of high compliment on his brilliant success in so early youth; urging him to follow up his victory with activity; and to exhort his royal brother to administer punishment unsparingly. But the pontiff's chief expressions of confidence and attachment were reserved for the Cardinal of Lorraine: "If there be any one," he said, "of those numerous illustrious Catholics by God's grace existing in France, who is to be congratulated more heartily than another on this seasonable victory, surely you are that person to whom we would peculiarly manifest our paternal sympathy. Not only because you are endowed with singular piety towards God, and are so deeply imbued with affection for the Catholic faith, that no one is likely to feel greater present joy, but because we know also that through God's assistance, it is mainly to your discreet counsels and wise suggestions that the Christian commonwealth of your kingdom is indebted for its prosperity." The remainder of the letter enjoins the cardinal, in a similar spirit to that which Pius displayed elsewhere, to exert every en-



egy which he possessed for the suppression of any inclination to mercy which might chance to arise in the young king's bosom.

**THE TWO FRIENDS.** A Novel, by the Countess of Blessington. 3 vols. Philadelphia.—CAREY, LEA & BLANCHARD.—While recording the conversations of, and yet instinct with some of the inspiration derived from long residence with, Lord Byron, this titled lady wrote attractively—if not always with the spirit of truth. But in this novel, we see nothing to commend. It is the slip-slop of high life, and low morals.

**SPIRITUAL DESPOTISM,** by the author of the Natural History of Enthusiasm: 1 vol. New York, LEAVITT, LORD & Co.—This is a striking volume, at this period of time, for one of its chief aims is to counteract the tendency of opinion in England, to the overthrow of the Establishment. To accomplish this object, much learning and research—ability of argument, and moderation in stating it, are employed.

**THE ELEMENTS OF MORAL SCIENCE,** by FRANCIS WAYLAND, D. D., President of Brown University, and Professor of Moral Philosophy, 1 vol.: New-York, COOKE & Co.—The use of Paley as a text book, and dissent from many of his doctrines, embodied at first in the form of objections orally made, and then in the views committed to writing with which, to the exclusion of those of Paley, President Wayland desired to imbue his students,—led to the preparation of this book:—a desire and hope, that what was found acceptable and instructive to his classes, may advance the general cause of moral science, induce the author to publish it.

It is a work of undoubted and profound ability, but it does not strike us as being, what the writer seems to consider it, an elementary book. Its arguments are sometimes too subtle and metaphysical, and at others assume too much knowledge and power of thought on the part of the reader, to make it a clear and easy work, for learners. To instructed or attentive minds, however, it offers abundant exercise.—and founding, as it rightly does, moral truth on the Scriptures, and considering, "that a system of ethics will be true, just in proportion as it develops the meaning of those Scriptures," it addresses itself to the highest hopes and interests of man.

The volume is well printed.

#### SUMMARY.

In the anniversary address of Professor Tucker, before the Virginia Historical Society, the following singular fact is mentioned, as connected with the History of Virginia.

In the year 1647, lawyers were forbidden to take any fees whatever, and 1658 they were excluded from the Legislature. For this uncourteous act, it must be confessed that their descendants have made the *amende honorable*. The medical profession seemed also an object of jealousy with the planters; as by another law (passed in 1646) physicians were required to swear to the value of their drugs.

**LAWS OF NEW YORK.**—The following summary from the Journal of Commerce, of some of the laws, passed at the late session of the Legislature, conveys all needful information, and saves us room.

An Act of the Legislature of New York, passed at the late session, provides that the affidavit of the printer or foreman of a newspaper, as to the publication of any advertisement in its columns, shall be entitled to be read in evidence in all Courts of Justice in this State, and shall be *prima facie* evidence of such publication.

Another Act authorizes the Commissioners of highways to grant a written permission for Rail-Roads to run across public roads when required.

Another Act directs all Banks in the State to

publish in two or more newspapers, an annual list of all depositors and dividends which at the date of the statement shall have remained unclaimed for two years next preceding. The first annual list is to be published on or before the 1st of September next.

Another act prohibits the sale of ardent spirits to paupers, or the purchase of any clothing from them furnished at the public expense, under penalty of \$5 for each offence, together (in the latter case) with the value of the clothing.

An Act was passed 23d of April, authorizing the Common Council of this city to appoint an additional Police or Special Justice, making five in all,—at any time after the first of June ensuing, i. e. as soon as the Jackson Corporation have got well warm in their seats.

**AUCTION AND SALT DUTIES.**—The following proposed amendment to the Constitution having been agreed to by a majority of both branches of the Legislature in 1834, and also by a majority of both branches of the Legislature in 1835, is to be submitted to the people for ratification at the annual election on the first Monday of November next, and if adopted, will by that act become a part of the Constitution.

"Whenever a sufficient amount of money shall be collected and safely invested for the reimbursement of such part as may then be unpaid of the money borrowed for the construction of the Erie and Champlain canals, the tenth section of the seventh article of the Constitution of this State, so far as it relates to the amount of duties on the manufacture of salt, and the amount of duties on the goods sold at auction, shall cease and determine; and thereafter the duties on goods sold at auction, excepting therefrom the sum of thirty-three thousand five hundred dollars otherwise appropriated by the act of the fifteenth April, one thousand eight hundred and seventeen, and the duties on the manufacture of salt, shall be restored to the general fund."

[From the Mercantile Advertiser.]

**A VERY BEAUTIFUL SIGHT.**—There are now lying at Pine st. wharf, the new and superb ships WESTMINSTER and ST. JAMES, built for, and attached to, Mr. Griswold's and Grinnell, Minturn & Co.'s London Line of Packets. The former is commanded by Henry L. Champlin, and the latter by William S. Sebor, gentlemen well known and highly respected in their professional characters as well as in private life. Of the ships, all we can say is, that they are each of about six hundred and fifty tons burthen, built of the best materials, finished in the neatest and most approved style, and will take rank with the best of the fine packet ships of which we as New Yorkers are justly proud. The Westminster will sail on the 1st, and the St. James on the 10th June.

The Scotland, another superb new ship of 700 tons, intended for the Liverpool trade, and commanded by our esteemed friend Wm. G. Hackstaff, is now lying at Murray's wharf.

On beholding these ships, we think that every spectator will agree in the expression we have used for the caption of this article, that they have witnessed a very beautiful sight.

**Connecticut State Prison.**—From the annual report of the Directors of the Connecticut State Prison, it appears that the number of convicts in the prison at this time is 207, of whom 50 are blacks and 19 are females. They are employed in various branches of labor, viz:—23 in the carpenter's shop, 21 in the smith's shop, 45 in the chair shop, 22 in the Britannia ware, 7 as nurses and waiters, and 10 are invalids. The females are employed partly in the kitchen, and partly in making cigars. About half the convicts are let out by the day on contracts. The income last year from the labor of the convicts, including the receipts of visitors, amounted to \$17,384, making an average of \$91 50 for each. The whole amount of expenses for the year, including the support of prisoners and the expenses of the guard, was \$12,116, or an average of \$63 77 for each. The prison has therefore made a profit from the labor of the prisoners of \$5,268. The Directors propose that a separate block of cells, 15 or 20 in number, should be built, to be paid for out of the income of the prison. The prison is represented as well calculated for the safe keeping of the prisoners, no one having made his escape.—(Daily Adv.)

[From the Canton Register.]

**NEW PUBLICATION.**—We live in a literary age, and it would be a pity not to advert to the new lucubrations with which our celestial friends favor the world. Unlike the western barbarians, who wish to be wiser than their forefathers, Chinese scholars either repeat what the ancients have said, or are entirely silent, to give the world to understand, that they are too wise to think themselves wiser than the sages of the olden times. It is therefore very difficult to find a new publication, and it was mere chance that we got a small book into our hands entitled King-kwei-sin-shoo;—Warning to people of rank—a new book; or Sew-heac-ke-tchen-chuen: The whole story of the elegant shoe, in four small volumes. Our readers are acquainted with the atrocities committed by Ye mangche, the village tyrant, who was strangled in November last; a poet had contrived to write a ballad, wherein he paints the dreadful punishment of this miscreant in hades, and the present work is a relation in prose, interspersed with verses, which gives an account of the criminal's life after his return into his native village. The style of the work is easy, full of good aphorisms, the details are interspersed with some sage remarks, and wherever a simple relation of facts be too insipid, the author has availed himself of fiction, to render the work more amusing. We have perused the whole, and only regret that the writer has abbreviated so many characters, as to put the patience of the reader to a trial in finding them out. As a literary production, we think the author worthy of praise, for he has handled the subject with great ability, and given to the story romantic interest. The conclusion is as impressive as a Chinese writer possibly could draw it. The indignant spectators behold the parting scene of Ye-mangche from his wife, who shows the utmost tenderness towards an unworthy husband. As soon as his body is removed they resolve to retaliate upon his family the same injury which he and his accomplices inflicted upon the neighborhood. Such a proposal meets with general applause, until a senior amongst the crowd points out to the bystanders the punishment which he is now to receive in hades, according to the tenets of buddhuism. This remark forcibly strikes them, and all acquiesce in the punishment of another world; the author recapitulates the sentences passed upon him and his accomplices in hades,—and concludes the whole with the moral of the story.

We have never read a work which has given us such an insight into the domestic life of the people of Canton. If these little volumes were translated they would surely please the English reader, who is anxious to know something about the Chinese.

**KENTUCKY LOAN.**—By an advertisement in this paper, it will be seen that Mr. Winter is here, with authority from the State of Kentucky, to borrow \$100,000, at 5 per cent, on bonds unredeemable for 20 years.

This is part of a loan authorised by the State to promote internal improvements, based on this solid foundation, that no advance of any part of it should be made, till double the sum be subscribed by individuals,—thus judiciously combining public and private interests. Kentucky owes not a dollar of debt—is a rich State—and will therefore doubtless obtain this loan on favorable terms.

**DEATH OF MR. BRONK.**—We regret to learn that JOHN L. BRONK, Esq. of Coxsackie, who was injured by the calamitous explosion on board the steamboat Advocate, after languishing nearly three weeks, died yesterday, at Coeymans.—[Albany Eve. Jour.]

**Wild Animals.**—The ship Susan arrived at Boston on Tuesday from the Cape of Good Hope, has brought the following rich cargo of wild animals, seventy-six in number, to Messrs. Macomber, Welsh, Gray, and Raynor, viz:—2 Elephants, 1 large Rhinoceros, 8 full grown Ostriches, 3 Bengal and 3 African Leopards, 6 white Vultures, 5 secretary Birds or serpent Eaters, 1 Cassowary bird, 3 laughing Hyenas, 2 strand or beach do., 3 spotted do., 1 Bengal or royal Tiger, 5 Porcupines, a full grown Lion and Lioness, 2 young do. do., 2 Jackalls, 1 Tiger cat, 1 Java Pony, 1 Mongoo, 2 Poonar or Hindostan Bears, 2 white and 1 crested Pelicans, 2 Zebras, 1 large Coffa Crane, 6 minor animals.



**A PUBLIC GALLERY OF THE FINE ARTS.**—The communication of *A Citizen*, in the N. Y. American, presents an appeal in behalf of the establishment of such a gallery in this city, and suggestions for carrying out the plan, which seem to us worthy of all encouragement.

It is understood that the venerable President of the Academy of Fine Arts, and many of his associates, fully concur in this project—of which the immediate effect would be—by putting before the eyes of our young artists, only good models—to refine and improve their talents; while on the public taste, it would exert that certain though gradual amelioration, which familiarity with the best productions of the pencil, and the chisel, fails not to produce. We shall be well pleased, indeed, if the truly practical suggestions of our correspondent, attract the attention and co-operation of the public.

**A WINTER IN THE FAR WEST.**—As it is the fashion, in regard to all American works, to chronicle the opinions respecting them of the English press, we take from the London Morning Herald, the following really just notice of Mr. Hoffman's attractive volumes:

"This adds one more to the interesting works on America, which have of late proceeded from American pens. It is an account of an excursion made by the author through different portions of the Union, but chiefly along the Indian frontiers. He travelled amongst scenes, which were as new to him, as they are to his British readers, and had to rough it amongst the backwoodsmen, and scattered remnants of the red men tribes, even as an adventurer in the early days of the settlements. With a strong feeling for the beauties of nature, and the picturesque in every form, Mr. Hoffman is a writer of great vivacity and unaffected vigor. In a word, his book is full of matter the most various upon sober realities, and realities which savor of wild romance, and he narrates with a freshness of style which well becomes his unshackled theme."

We add these two extracts on the same subject from the *Court Magazine* and the *London Morning Post*.

[From the *Court Magazine*.]

"This is a most delightful book. No one has given a truer or more vivid description than Mr. Hoffman, of American wilds and American people. We can promise our readers a store of entertainment from these volumes."

[From the *Morning Post*.]

"This new work, by Mr. Hoffman, will be an acceptable offering to the general reader, and to all those who take an interest in comparing the impressions of an American traveller in reference to the scenes and society of the 'Far West' with the spirited but satirical sketches of Mrs. Trollope and Captain Basil Hall, and also to those who love nature in her undress, and find a philosophical gratification in tracing the elementary operation of the social systems in those remote regions which form the boundary between civilized and savage life. The narrative is very amusing. Over part of it, is diffused a tinge of romantic interest and adventure, arising from those numerous accidents by flood and field, that untaught heroism and unregulated energy, that habitual communing with nature in her wildest, perhaps her most attractive forms, which constitute the interest and the charm of semi-savage life."

**OHIO.**—The Governor of Ohio has summoned the Legislature of the State to meet on the 8th proximo. The following is his Proclamation:

"Whereas, great and weighty matters, claiming the consideration of the General Assembly of the State of Ohio, form an extraordinary occasion for convening them: I, ROBERT LUCAS, Governor and Commander-in-Chief of said State, do, by these presents, appoint Monday the eighth day of June next, for their meeting at the city of Columbus, within said State, hereby requiring the respective Senators and Representatives then and there to convene in General Assembly, in order to receive such communications as may then be made to them, and to consult and determine on such measures, as in their wisdom, may be deemed meet for the welfare of the State of Ohio.

"In testimony whereof," &c.

**Attempted Balloon Ascent at Brooklyn.**—Yesterday evening Mr. Henry Prince, a young man who is a machinist at Brooklyn, attempted to ascend in a balloon from a piece of ground which was enclosed for the purpose with boards ten or twelve feet high, at the junction of Fulton and Clinton streets. Mr. Prince unfortunately, a few evenings back, exhibited his balloon gratis, in a large room, where some evil minded person cut it in two places, which Mr. Prince repaired, but as it turned out, not sufficiently well to retain the gas, which prevented his making his intended ascent. The inefficiency of the balloon was not discovered until after a considerable number of persons had entered the enclosure, and paid fifty cents each for admission. As soon as Mr. Prince discovered that he would be unable to make the ascent, he addressed the persons who had paid their money, and told them they could get back their tickets on going out. A number of ruffians who were outside the enclosure, and had paid nothing, immediately knocked down the boards which formed the enclosure, and got inside and demanded the price of the tickets. Mr. Prince remonstrated with them, and an altercation ensued, which ended in his being obliged to take refuge in a neighboring house, to avoid the threatened violence of the mob. Mr. Prince has lost about \$300 by the transaction, but he is nevertheless determined to risk another ascent in an open field, leaving it to the public to remunerate him as they may think proper.—[*Jour. of Com.*]

The Cincinnati aeronaut, Mr. Clayton, who was to essay a visit in his balloon, to the sea-board some days ago, was cut short in his voyage at the outset. Owing to the violence of the wind, the balloon was snatched from the grasp of those who held the cord, before it had obtained sufficient upward elevation to avoid the houses, &c., and was consequently dashed against them with violence, endangering the life of Mr. Clayton. Fortunately, the car was, by one of the those concussions, separated from the balloon, and left with Mr. C. on the top of a house—the balloon winging its way into illimitable space. Mr. C. was not hurt.

A public meeting was afterwards held at Cincinnati, *Bellamy Storer* in the chair, at which it was resolved to raise by subscription a sum sufficient to indemnify Mr. Clayton for his loss. On his part, he is resolute in his purpose to make us Cis-Alleghians, a visit by balloon.

**WHALING WITH PRUSSIC ACID.**—It appears by the *Nantucket Inquirer* that the "novel" and "ingenious" scheme for killing whales by means of prussic acid, for which Mr. Chamberlain, of Boston, has "secured a patent", is none other than the invention of Mr. William Coffin, Jr. of Nantucket. The *Inquirer* says:

"Over two years since, having observed the instantaneously fatal operation of prussic acid upon the vital powers of several small animals, Mr. Coffin was led to consider its probable effect upon those enormous creatures which it is the peculiar business of this community to pursue and capture. He forthwith caused several harpoons to be constructed, precisely on the principle now described in the article referred to—each provided with a small phial of the 'horrible liquid.' No opportunity for a proper experiment with this formidable weapon has ever yet occurred—for the reason that whalemen generally are apprehensive, and perhaps with good reason, of danger to themselves in its use. But in the month of July, 1833, when great interest was excited by the alleged appearance of the Sea Serpent in Massachusetts Bay, a vessel was fitted out from this port, for the express purpose of taking that monster dead or alive, should it be fallen in with. On recurring to our files, we find in a notice of the departure of this vessel, the following paragraph:

"Among the implements of destruction on board, are sundry harpoons of new construction, one thrust from which will produce instant death. This description of harpoon carries within its barb a dose of concentrated poison, the most subtle which human science has yet been able to discover."

This vessel proceeded to Boston, where the nature of the weapons prepared was explained freely to many individuals: and we are inclined to sus-

pect that this was the origin of that "very novel scheme," that "unique discovery," made by an "uncommonly ingenious" manufacturer of "hooks and eyes." There may exist a natural connexion between these two branches of ingenuity; for the idea of "hooks and eyes" may have suggested the notion hooking up the discoveries of other people's eyes. But

"Canst thou draw out Leviathan with an hook?"

It becomes our painful duty, says the *Wilmington N. C. Advertiser*, to record the death of Major George Blaney, of the U. S. Corps of Engineers, who expired at Smithville, on Friday, the 15th instant, aged 39 years. Major Blaney was a gentleman and a man of honor, in the full and legitimate import of the terms.

**Michigan Convention.**—The delegates chosen with a view to the formation of a constitution for the Territory of Michigan, assembled in convention at Detroit, on the 11th inst. John Biddle was appointed president of the convention by resolution, and Mr. J. Bacon and Chas. W. Whipple, secretaries.

It is a singular coincidence that our French losses sustained by the decrees of the Emperor Napoleon, should have, at this late day, been indemnified by the French government, and that the first news of the important event should have reached here by the *Napoleon*.—[*Gazette*.]

[From the *Daily Advertiser*.]

**LITERARY.**—We have permission to publish the following extracts from the minutes of the American Lyceum, at their late fifth Annual Meeting.—The subject is interesting to all friendly to education, particularly female education in our country. We understand that the reading of the paper mentioned excited the warm and general gratification of the Society, and called forth several speeches from members.

"New York, May 9th, 1835.

**Morning Session.**—President Duer read the Essay of Miss Catharine E. Beecher, of Ohio, on the Education of Female Teachers.

On motion of Judge Radcliffe, seconded by the Rev. Mr. Johnson of Brooklyn, it was unanimously

Resolved, That the thanks of the American Lyceum be presented to Miss Catharine E. Beecher for her Essay on the Education of Female Teachers.

Resolved, That the Lyceum, considering the extensive circulation of this Essay, to be well calculated to excite public attention to the importance of its object, and the sentiments it contains particularly important at this time would recommend it to the public, and request those connected with the popular press to aid in its promulgation, by publishing extracts.

Resolved, That the subject of Female Education deserves more attention than it has yet received from the American community.

Resolved, That the establishment of liberal endowment of a considerable number of female seminaries for a high order, especially for the education of female teachers, is highly deserving of the benefactions of the intelligent and wealthy of the community, as well as of Legislative patronage.

Resolved, That the thanks of the Lyceum be presented to the Ladies who have undertaken to defray the expense of publishing the address.

True copy from the Minutes.

(Signed)

R. G. RANKIN, Sec. pro tem.

[From the *Buffalo Com. Adv. of Wednesday*.]

**MELANCHOLY LOSS OF LIFE.**—Early yesterday morning, two men named *Briley* and *Bailey*, who were attempting to pass down the Niagara river, from Tonawanta to Chippewa, U. C., were carried by a sudden gust of wind into the rapids above the falls. In this alarming situation they deserted the scow, and swam for a temporary refuge to the shoals, about one and a half miles from shore. On this precarious footing, up to their necks in water, a rapid current sweeping around them, threatening to bear them to the awful brink below, these unfortunate men maintained their position for some time, shouting for assistance. A man named *Udell* put off alone, in a boat, to their relief; but one of his oars broke, and he was obliged to scull back with the other. *Briley* then swam to a floating log, on which he attempted to reach the shore, but was carried downward by the irresistible current and



precipitated into the frightful gulf below. A brother of Udell's now volunteered to aid in the attempt to save the remaining sufferer; and furnished with two oars each, they again put off, and succeeded in rescuing the helpless Bailey from his perilous situation.

We hope the neighborhood will, by some public testimonial, honor the benevolent gallantry of these two Udells. Theirs was a noble daring, from the purest motives.—(Ed. N. Y. AMER.)

**CITY FINANCES.**—The Annual Message of the Mayor, ordered to be printed on the 18th instant, was laid on the table of the members. The following is a statement of the financial concerns of the city:

The city debt permanent and temporary is	\$745,034
Paid off during 1834	91,309
Warrants on the Treasury last year	1,915,638
Probable drafts next year, including water	3,000,000
Sinking fund on hand	130,000
Real Estate owned by the city	10,000,000

Miss Landon says "a quotation aptly expressed, is as good as an original thought;" we never met with a more forcible argument in favor of that thesis than the following from Brooks' Winchester Republican:—

"Hope wither in fled, and massa sigh'd farewell!"  
An advertiser in Virginia offers a reward for the apprehension of a mulatto named Hope Witherin, who has practically illustrated the line at the head of this paragraph by obsequiating bodyaceously.

**Pinning Extraordinary.**—A friend of ours received the following communication through the Post office:—[Charleston Courier.]

[If Abel had been able to cane Cain, Cain would not have been able to cane Abel; Abel would therefore not have been Cane-Abel.] CANE-ABLE.

**LATER FROM EUROPE.**—After a long interval, we have intelligence from France and England nine or ten days later than before. The packet ship *Canada* from London, arrived on Saturday evening, with papers of the 18th from that city. The *Rhode Island* from Havre with Paris dates of the 14th, arrived yesterday, as did the *South America* from Liverpool of the 16th, and *Cork* of the 22d—having put into the latter port by reason of Captain Waterman's accidentally breaking his leg.

**New Ministry.**—We have great pleasure in announcing, that whatever difficulties may have existed appear to have been altogether overcome, and that Lord Melbourne has been able to form a Cabinet, which we have no doubt, will give entire satisfaction to the country.

The following is a list of the Members of the Cabinet, formed from rumors the most worthy of credit, which have reached us, and which have been in circulation days past. We trust it will prove to be correct.

**In the Cabinet.**—First Lord of the Treasury, Viscount Melbourne.  
President of the Council, Marquis of Lansdowne.  
Secretary of State for the Home Department, Lord John Russell.  
Secretary of State for the Foreign Department, Viscount Palmerston.  
Secretary of State for the Colonies, Right Hon. Charles Grant.  
Chancellor of the Exchequer, Right Hon. T. Spring Rice.  
President of the Board of Control, Right Hon. Sir J. C. Hobhouse.  
First Lord of the Admiralty, Lord Auckland.  
Chancellor of the Duchy of Lancaster, Lord Holland.  
Privy Seal and Woods and Forests, Viscount Duncannon.  
Secretary at War, Viscount Howick.  
President of the Board of Trade, Right Hon. C. Poulett Thomas.

If we are not misled as to the members of the Cabinet, it will thus appear, that their number is considerably smaller than during the late Administrations, which we consider a more advantageous arrangement for the transaction of the business of the nation.

Sir Robert Peel and the Duke of Wellington did

not remain at the place above ten minutes. There was some cheering on their departure.

Lord Melbourne was loudly cheered on his arrival at the Palace.—[Courier.]

**LATER AND DECISIVE intelligence** from Europe, by the *Napoleon*, Liverpool packet ship of the 24th, was received last night. It confirmed the confident prediction we hazarded in yesterday's paper, that not "many hours, probably, would elapse," before hearing that the Indemnity Bill had passed.

It has passed by the extraordinary majority of 289 to 187. The condition annexed is a mere salvo to national feeling, and will easily be disposed of on our behalf, by a simple reference to, and repetition of, the language of the President's Message.

The amendment of Gen. Valazé, which was adopted, is to this effect:

"The payments to be effected in execution of the first article of the present Bill, shall take place only after the French Government shall have received satisfactory explanations as to the Message of the President of the United States, dated December 2, 1834."

Now it would be a full and complete answer on our part, to the requisition of this amendment, to recall and reiterate the following declaration, which, in the President's annual message, immediately follows the recommendation, that, in a certain contingency, reprisals be resorted to.

"Such a measure ought not to be considered by France as a menace. Her pride and power are too well known, to expect any thing from her fears, and preclude the necessity of a declaration, that nothing partaking of the character of intimidation, is intended by us."

What was said in good faith in December last, there can be no sort of objection to repeating, with increased emphasis, if necessary, now—especially as a resort to the alternative, to which this language, when used, referred, has been rendered unnecessary, by the compliance of the French Government with our reasonable demands.

A silly, blustering, paragraph, in the Liverpool Journal, which talks about this country being called upon to make an apology, has no foundation in fact.

This embarrassing question may, therefore, be considered as finally settled; and without now inquiring, where the merit of, or the obstacles to, an earlier and less ungracious solution of the difficulty, belong, we sincerely congratulate the country on the result.

Mr. Livingston will now, according to his orders, return, we presume, to the United States, rather than retire to Holland, or any neighboring country—leaving a *Chargé* in Paris.

The Constitution will, of course, proceed to her station in the Mediterranean.

The Queen of the Belgians has given another *Prince* to her people!—and they rejoice accordingly.

In English affairs there is nothing new by this arrival.

WHITEHALL, April 8, 1835.

The King has been pleased to direct letters patent to be passed under the Great Seal, granting the dignity of a Baron of the United Kingdom of Great Britain and Ireland unto the Right Honorable Alexander Baring, of the Grange, in the county of Southampton, and the heirs male of his body lawfully begotten, by the name, style, and title of Baron Ashburton, of Ashburton, in the county of Devon.

There are at this moment as many as eight ex-Chancellors of the Exchequer living:—Lord Sidmouth, the Marquis of Lansdowne, Lord Bexley, (who held that office 11 years,) Earl of Ripon, Mr. Herries, Mr. Goulburn, Earl Spencer, and Sir Robert Peel. The number of persons living who have held the office of Premier, or first Lord of the Treasury, is six:—Lord Sidmouth, the Earl of Ripon, the Duke of Wellington, Earl Grey, Lord Melbourne, and Sir Robert Peel.

Sir Robert Peel's administration was the shortest known in England, at least since 1760, the date of the accession of George the Third. It lasted only 118 days; the other short ones during that period were that of Lord Shelbourne in 1782, which lasted five days longer—that of Mr. Canning, the duration of which was 135—and that of the Earl of Ripon, which was 152 days. The duration of Lord Melbourne's first administration was 186 days.

The only pensions granted by Sir Robert Peel during his administration, excepting one of 100*l.* per annum to the widow of Mr. Temple, late Governor of Sierra Leone, are the following:—Professor Airy, 300*l.*; Mr. Southey, 300*l.*; Mrs. Somerville, 200*l.*; James Montgomery, 150*l.*; Sharon Turner, 200*l.* This, we presume, is proof of Conservative profligacy in the administration of patronage—of Sir Robert Peel's disregard of literary merit, and of his desire to repress literary exertion. But stop, the pensioners are all Tories? No; the majority are Whigs. We should like to see what Sir Robert's predecessors for four years can set off against these pensions.—[Standard.]

Lady Byron, widow of the noble poet, has broken up her establishment at Hanger Wood, near Acton, preparatory to her departure with her daughter, the Hon. Ada Augusta Byron, on a tour for the summer in France and Italy.

The French chemists make the following proposition, in order to render less frequent the crime of poisoning, and to put on their guard those who may be marked out as the victims of revenge, jealousy, or the like. From 1824 to 1832, the number of individuals accused of poisoning was 273; and it appeared, that in many instances the intended victims had been saved by the bad taste communicated to the food by the poisonous substance. It is, therefore, recommended that it should be rendered compulsory to color or give a flavor to all poisonous substances which would not be deteriorated by the admixture. For the latter purpose, aloes have been suggested; and of this many English as well as French chemists have approved. It has also been recommended to scent all poisons with the same odor—musk, for instance.

In Spain, the battle between the contending parties lingers along. *Mina* has been displaced from the command of the Queen's troops, and we rejoice at it, for hitherto his only feats seem to have been the massacre of peasants, and the burning of villages. *Valdez*, the minister of war, succeeds him. The issue of the contest is uncertain, and the state of Spain manifestly most unsettled.

**ERUPTION OF VESUVIUS.**—A Naples letter of 2d April, published in a London paper, makes this statement:—

"Vesuvius, which had for the last fortnight, given indications of an approaching eruption, burst forth last evening in all its fury. During the afternoon a storm of hail and rain, had detained the crowd of visitors at Resina, who would otherwise have been inevitably sacrificed, as the very ground round the crater, where hundreds had been walking only the evening before, was carried up into the air at the first explosion. The *Poje's* grandola, of a thousand rockets, is a joke to it. At half past nine (within less than three hours) the detonations ceased, and the fire gradually subsided.—This morning there is not even the least smoke."

# MY AUNT.

My aunt has many queer notions,—  
She never butters her bread—  
She declares that the Bulwer novels  
Are things not fit to be read;  
She thinks that to flirt is a crime,—  
And especially with youth;  
And she thinks the "Paradise Lost,"  
Is every syllable truth.  
My aunt has got to her spectacles,  
Though without them she sees well enough;  
She is very well versed in politics,  
And thinks your poetry stuff.  
She imagines that all the clergymen  
Are as wise as wise can be;  
She thinks that Pope is a poet—  
But there she agrees with me.  
She dreams she can tell the mark that is left  
On my cousin's lip by a kiss;  
And of all her antic theories  
I am sure not to meddle with this.  
She might tell the track of a bird through the air,  
Or the track of a ship on the sea—  
On the viewless heart, not the visible lip,  
The stamp of a kiss will be!



(From the Boston Daily Advertiser.)

### Visit to Lady Hester Stanhope.

We translate the following history of this mysterious woman, from the notes of a Traveller, by Alphonso de Lamartine, member of the French Academy, as published in the *Courier des Etats Unis*.

Lady Hester Stanhope, the niece of Mr. Pitt, after the death of her uncle, quitted England and travelled over Europe. Young, beautiful and rich, she was every where received with the attentions and the interest, which her rank, her fortune, her intelligence and her beauty might be expected to excite. She constantly refused to unite her fate with that of her worthiest admirers, and having passed several years in the principal cities of Europe, she embarked with a numerous suite for Constantinople. The motives for this expatriation have never been known. By some it has been attributed to the death of a young English general, who was killed at this period in Spain, and for whom Lady Hester is said to retain in her heart to the present day, the most tender regret. Others suppose it to be owing merely to the taste for adventure, which belonged to the enterprising and courageous character of this young person. Whatever it may be, she set out, and passed several years in Constantinople, and finally embarked for Syria in an English vessel, taking with her the greater part of her property, and jewels of immense value, together with presents of all kinds.

The ship was overtaken by a tempest in the Gulf of Mæri, on the Coast of Caramania, opposite the Isle of Rhodes, and struck on a rock some miles from the shore. The vessel went to pieces in a few moments, and Lady Stanhope's treasures were buried in the sea; she escaped barely with her life, and was carried on a piece of the ship to a little desert island, where she passed twenty-four hours, without food and without assistance. At last some fishermen of Marinoriza, who were seeking for spoils of the wreck, discovered her, and conducted her to Rhodes, where she made herself known to the English Consul. This deplorable event did not cool her zeal: she went to Malta, and from there to England. She collected the wreck of her fortune, turned into money a part of her funded estates, loaded another ship with money and presents for the countries she intended to visit, and set sail. The voyage was prosperous, and she landed at Latakia, the ancient Laodicea, on the Coast of Syria, between Tripoli and Alexandria. She established herself in that neighborhood, studied Arabic, surrounded herself with people who could facilitate for her an intercourse with the different Arabian tribes, Druzes, and Maronites, of the country, and prepared, (as I was then doing myself,) to make journeys of discovery into the less accessible parts of Arabia, of Mesopotamia, and of the desert.

When she had become familiar with the language, the costume, the manners and the customs of the country, she organized a numerous caravan, loaded camels, with rich presents for the Arabians, and travelled over every part of Syria. She stopped at Jerusalem, at Damascus, at Aleppo, at Balbec and at Palmyra. It was at this last station that numerous tribes of wandering Arabs, who had assisted her in visiting these ruins, united around her tent, to the number of forty or fifty thousand, and charmed with her beauty, her grace, and her magnificence, proclaimed her Queen of Palmyra, and delivered Firmans to her, by means of which it was agreed, that any European, protected by her, might come in safety to visit the desert and the ruins of Balbec and Palmyra, provided he engaged to pay a tribute of a thousand piastres. This treaty still exists, and will be faithfully executed by the Arabs, if they receive positive proof of the protection of Lady Stanhope.

On her return from Palmyra, she escaped being carried away by a numerous band of Arabs of a different tribe, and enemies to those of Palmyra. She received timely notice from her own people, and owed her security and that of her caravan to a forced night march, and to the swiftness of her horses, who travelled over an incredible space of the desert in twenty-four hours. She returned to Damascus, where she resided some months, under the protection of the Turkish Pacha, to whom she had been strongly recommended by the Porte.

After a wandering life in all the countries of the East, Lady Hester Stanhope finally fixed herself in an almost inaccessible solitude on one of the mountains of Lebanon, near to Saïde, the ancient Sidon. The Pacha of St. Sohn D'Acre, Abdalapa, who

had a great respect for her and devotedness to her, granted to her the remains of a convent, and the village of Dgioun, inhabited by the Druzes. She built there several houses, surrounded by a wall of enclosure, like our fortifications of the middle ages. She made artificially a charming garden in the Turkish fashion, in which, besides a fruit and flower garden and graperies, are kiosks enriched with sculpture and arabesque paintings, water running in marble fountains, jets in the middle of the pavements of her kiosks, together with orange, fig, and citron trees in abundance. There Lady Stanhope lived for several years in a truly oriental style of luxury—surrounded by a great number of European or Arabian drogomans, a numerous train of women and black slaves, and in relations of friendship and even of political alliance with the Porte, with Abdala-pacha, with the Emir Beschir, sovereign of Lebanon, and especially with the Arabian Scheiks of the deserts of Syria and Bagdad.

Soon her fortune which had been still considerable, diminished from the derangement of her affairs caused by her absence from England, and she found herself reduced to thirty or forty thousand francs income, which is still sufficient in this country for the train which Lady Stanhope is obliged to keep up. Meantime those persons who had accompanied her from Europe, either died or left her, the friendship of the Arabs, which could only be maintained by presents, began to cool, her intercourse with them became less frequent, and Lady Hester fell into the complete solitude in which I found her. But she still exhibits the same heroism and the same energy, with all the constancy and resolution which have always marked her character. She never thinks for a moment of retracing her steps, she never gives a look to the world and to past times. She does not bend under neglect, or misfortune, or the prospect of old age and the forgetfulness of the living. She will remain alone where she now is, without books, without journals, without letters from Europe, without friends, without even servants, who are personally attached to her. She is surrounded merely by some negroes and some black slave children, a few Arabian peasants to take care of her garden, her horses, and to attend to her personal safety. It is generally believed in the country where she resides, and my intercourse with her inclines me to the same opinion, that the supernatural strength of her mind and of her resolution is found not merely in her own character, but also in high raised religious ideas, in which the illumination of Europe is confounded with some of the oriental forms of faith, and added to this the wonders of astrology. Whatever it may be, Lady Stanhope is a great name in the east, and a great astonishment to Europe. Finding myself so near her, I felt a desire to see her; her ideas of solitude had so much apparent sympathy with my own thoughts, that I felt very glad to ascertain how near we approached each other.

Lady Hester was apparently fifty years old. She has features which cannot be spoiled by age. Freshness, color, grace, vanish with youth, but when beauty is in the form itself, in the purity of its lines, in dignity, majesty, in the thought of a man's or woman's face, beauty may change at the different epochs of life, but it does not pass away. Such is that of Lady Stanhope—she wore on her head a white turban, on the forehead a band of purple woollen cloth, which fell on each side from the head to the shoulders, a long yellow cashmere shawl and immense Turkish robe of white silk, with floating sleeves, enveloped her whole person in its simple and majestic folds, and through only one opening on the bosom, which was left by the first tunic, was made visible a second robe of embroidered Persian stuff, which reached the throat, and was there fastened by a pearl ornament. Turkish boots of yellow morocco, embroidered with silk, completed this beautiful oriental costume, which she wore with the freedom and grace of a person who had never from her youth worn any other.

I was conducted through an arbor of jessamines and rose laurels to the gate of her gardens. A table was laid for M. Parseval and myself, we dined very quickly, and she only waited till we had risen from table, before she sent Leonardi to tell me she was waiting for me. I hastened, and found her smoking a long oriental pipe—she ordered one to be brought to me. I was already accustomed to see the most beautiful and elegant women of the East smoke, and I therefore was not shocked at her gross and careless attitude, nor at that odoriferous smoke which escaped in light columns from the lips

of a beautiful woman, and interrupted the conversation without chilling it. We conversed a long time in this manner, and always on the favorite subject, on the only and mysterious theme of this extraordinary woman, this modern magician, recalling exactly the famous magicians of antiquity—this Circe of the deserts.

It appeared to me that the religious doctrines of Lady Hester were a confused, though skilful mixture of the different religions in the midst of which she has condemned herself to live. Mysterious as the Druzes, of whom she alone, in the world, perhaps, knows the mystical secret—resigned as a muselman, and a fatalist as he is, with the Jew expecting a Messiah, and with the Christian professing the adoration of Christ, and the practice of his charitable morality. Add to that the fantastic colors and the supernatural reveries of an imagination tintured by the East, and heated by solitude and meditation, some revelations perhaps of Arabian astrologers, and you may form some idea of this sublime and fanciful compound, which it is more easy to call madness, than to analyse and understand. No, this woman is not insane. Madness, which inscribes itself in but too evident a manner in the eyes, is not written in her beautiful and direct look. Madness, which always betrays itself in conversation, which it is ever interrupting by sudden, disorderly and eccentric starts, is not to be detected in Lady Hester's conversation, which, while it is elevated, mystical and cloudy, is always sustained, connected and powerful.

If I were obliged to pronounce, I should say that it is a voluntary madness, which is studied, which knows itself, and which has its reasons for appearing madness. The powerful admiration which her genius has exercised and still continues to exercise over the Arab people, who surround the mountains, proves that this pretended madness is only an instrument. To the inhabitants of this country of prodigies, to these men of the rocks and deserts whose imagination is more dark and colored than the horizon of their own sands or seas—the word of Mahomet or of Lady Stanhope is necessary. They want the communion with the stars, prophecies, miracles, the second sight of genius. Lady Stanhope understood this; at first by the high reach of her truly superior understanding, and then perhaps like all beings endowed with powerful intellectual faculties, she has succeeded in seducing herself, and has made herself the first convert of the symbol she has created for others. This is the effect this woman produced on me. She cannot be judged or classed in a word, she is a statue of immense dimensions. I shall not be surprised if at some not distant day she realizes a part of the destiny which she promises herself—an empire in Arabia, a throne in Jerusalem. The least political commotion in the region which she inhabits might raise her even to that.

I have, said I to her, on this subject but one reproach to make to you, it is that you have been too timid with events, and that you have not pushed your fortune where it might conduct you. You speak, said she to me, like a man who still believes too much in human will, and not enough in the irresistible empire of destiny—my own strength is in that—I await it, I do not invoke it—I am growing old—I have diminished considerably my fortune, and am now alone and abandoned on this rock of the desert, a prey to the first bold fellow who would wish to force my gates, surrounded by a band of faithless servants and ungrateful slaves, who rob me every day and sometimes threaten my life. Lately I owed my salvation only to my dagger, of which I was forced to make use to defend my bosom against the dagger of a black slave whom I had brought up. Ah well, in the midst of all these tribulations I am happy; I answer every one with the sacred word of the Muselman, *Allah Kennim*, the will of God, and I await with confidence the future, of which I have spoken to you, and of which I should wish to inspire you with the certainty which you ought to have.

The name of Bonaparte was mentioned, as usual, in the conversation, to himself and to me. I thought, said I to her, that your fanaticism for this man, would put a barrier between us. It is only his misfortunes and my pity for him, which makes me an enthusiast in his cause, said she. It is the same with me, I replied, and so we understand each other. I could not explain how a religious and moral woman should adore strength alone, without religion, and without liberty—Bonaparte was a great reformer, no doubt—he reformed the social world,



but he did not consider sufficiently the elements of which he remodelled it. He moulded his statue with the clay, and with his personal interest, instead of casting it out of divine and moral sentiments, out of virtue and liberty.

The night passed away in this manner in conversing freely and without affectation, on the part of Lady Hunter, every subject which springs from a word, and leads by chance to a conversation. I felt that no cord was wanting to that elevated and firm understanding, and that every string in this instrument gave its proper sound, full and strong, with the exception perhaps of the metaphysical string, which too great tension and solitude had falsified or raised to a too high key for mortal understandings. We parted with a sincere regret on my part, and an obliging exhibition of regret on hers.

"No, adieu," said she, "we shall often meet again in this journey, and oftener still in other journeys which you do not now project. Go to rest, and remember that you leave a friend in the solitudes of Lebanon."

She held out her hand, I laid mine on my heart after the Arabian fashion, and we departed.

### The Parisian Sibyl.

Whence comes it that man has such a desire to interrogate the future, such an idle anxiety to divine the veiled secrets of fortune? In every nation I discover traces of the imprudent curiosity. The Jews had their witches, the Greeks their sibyls, the Persians their magi, the Spaniards their gipsies; the Romans had their augurs, whose oracles they respected; the French have had their sorcerers, whom they frequently finished by burning them with great ceremony.

In former days the business of sorcery was not exercised in France with impunity, and those who were given to shuffling fortunes from cards, answered for it too often with their lives. Our good ancestors were in the habit of burning without scruple all who were guilty of witchcraft; and my good ladies Villeneuve, Michel, and Le Normand, now in full career, if they had been born a century earlier, would have infallibly ended their days at the stake. But chronomancy, cartomancy and necromancy are at present fashionable sciences, and lucrative branches of trade; and sorcery, instead of leading to a funeral pile, conducts to fortune. All Paris have in succession paid their respects to the cards of Lady Villeneuve, the whites of eggs of Madame Michel, and the black hen of Mademoiselle Le Normand. Each of these practitioners has been celebrated in her turn; but a young sorceress is now before the public who promises to surpass them all.

The temple of this new sibyl is in one of the most frequented quarters of Paris. In the morning it is open to the beauty, tender and timid, but who confides in the turn of a card; to the greedy speculator, who would know what success may attend his enterprises; to the modest and innocent girl who is anxious to discover whom she should fall in love with; to the unquiet husband, whose dreams are disturbed by an ugly major of dragons, in big boots and monstrous moustachios; to the gamester who would win back at whist, what he has lost at faro. The numerous equipages ranged before the entrance, indicate the rank of the visitors.

I had heard the oracles of this modern Pythia frequently cited with great praise. Some ladies spoke to me in high terms of the vivacity of her mind, the delicacy of her questions, and especially of the promptness with which she divined what they dared not to tell her. Gentlemen had described in raptures the sweetness of her features, the elegance of her manners, and assured me that she was a most exquisite creature. These eulogies excited my curiosity; and I determined to ascertain for myself the merits and beauties of this celebrated personage.

The clock had just struck eight as I presented myself at the door of her hotel. On declaring the object of my visit, I was ushered into a little saloon furnished with the greatest simplicity, with nothing to indicate the profession of its occupant. This was a young lady about twenty-five years of age, tall, well made, expressing herself with grace, very agreeable and various in her conversation. There was something a little malicious in her glance, and sardonic in her smile, and she joked freely upon the inconveniences of her art, and attempted to convince me of its excellence. I saw that she was not herself very well persuaded of the truth she wished to impress upon me; and I thought

that of all who came into her house, the young sibyl herself had the least faith in the infallibility of her oracles.

After having conversed with me a few moments, she ascended the sacred tripod: already the prophetic spirit had begun to move the delicate fibres of her brain, when a light hand rapped three times at the door of our apartment and uttered in a troubled voice—"Open; it is I." My pretty prophetess was evidently embarrassed, and I was preparing to take my leave. She prevented me—"You have the air of a gallant gentleman," she at length said to me, smiling. I bowed assent. "I am sure of it," she added, "go into this cabinet." She pushed me gently into the cabinet, shut the door upon me, and to prevent all accidents took the key with her. I consoled my captivity by making immediate use of a crevice, through which I could see every thing that was going on in the saloon.

The lady who entered was younger and more beautiful than the sibyl. Her face was a picture of innocence and candor. At length said she laughing, I have succeeded. Madame de Bassac, after having managed to inflame the jealousy of my husband, has prevailed on him to pay a visit to you; he will be here in a minute and do not forget our agreement.

The sound of a bell put an end to the conversation; the young visitor disappeared, and her friend prepared to receive De Julien.

He enters, looks about the room with nonchalance, and the better to decide upon the powers of the magician, observes that her art must reveal to her the object of his present visit. Do you doubt it? said the sibyl, in an offended tone; give yourself then the trouble to be seated; and condescend to listen to me. He took a chair. She collected herself, and arranged the cards upon the table, by way of prelude to the following dialogue.

You are married, sir; sixteen or seventeen months ago you espoused a young lady of about half your age.

What, madam?

Who has given you a thousand proofs of affection, and yet you continue to suspect her.

I confess it, said he, in utter amazement.

Queen of Diamonds—these suspicions you have imbibed from a female friend of your wife.

I admit the fact.

Seven of Spades—she has carried her effrontery so far as to advise you to apply to me.

Astonishing!

She takes up the cards, and hands them to De Julien, who cuts them, while the sibyl continues with a gravity that nothing can disturb, your wife is faithful.

Do you believe so?

I know it; but she complains of your conduct.

Of my conduct?

Your suspicions harass her.

O no; she is not aware of them.

She has discovered them; you entertain at your house a very dangerous man.

And who is he?

The King of Clubs.

I do not know him, madam.

A dark man; thirty-six years old.

He is my best friend.

He is desirous of becoming your wife's best friend, sir.

You amaze me! I am thunderstruck!

For three months past he has been trying to induce her to accept a set of diamonds that he knows you have refused to purchase.

It is true.

But she declines his offers with dignity; it is from you only that she is willing to accept any ornament that may add to her beauty.

Poor woman! exclaimed the relenting husband.

Here our sibyl again took up the cards, and divided them into three parcels, which she thus explained:

You blush at the suspicions you have entertained.

Because you assure me of the honor of my wife.

She dreams of nothing but your pleasure; at this very moment she is engaged in some scheme to advance your happiness. But, what do I see!

Eight of Clubs, and Nine of Hearts!

Is this bad fortune?

Quite the contrary; you are thinking of a present for your lady.

O a present!

The set of diamonds.

Indeed, indeed—

In order that having me with ungratified, she may be exposed to no temptation.

But these jewels are very dear.

Ah! sir, can you too generously reward the virtue of a woman who adores you?

My wife adores me!

Eight of Hearts and Ace of Spades, Madame de Julien loves no one but her husband!

At these words, which proved the extent for the young magician's science, De Julien rose from his seat in transports; he cast upon the table a purse of indefinite weight, and ran to the jeweller to purchase the happy talisman, which was to restore felicity to his household. Good fortune all that day followed his footsteps; the jeweller in an excess of good humor made him a considerable discount, and the virtue of my lady cost much less than he anticipated.

As soon as her husband was gone, Madame De Julien reappeared from her hiding place, and embraced her friend with every expression of kindness and tender gratitude. But they immediately separated, for it was necessary that the young wife should return home to receive her spouse and her diamonds.

The sibyl liberated me, and prevented every manner of reproach on my part, by laughing herself, with a very pretty grace, at the scene of which she had made me a witness. I will not propose to you now, said she, to cast your horoscope; what you have just seen and heard, forbids the degree of confidence that is required in those who come to consult me; but I would ask you not to judge my conduct with too much severity. Men are but grown up children who pay to be deceived; and the error which flatters, is better than the truth which afflicts them. Instead of tearing away the veil that conceals the faults of De Julien's spouse, I darken them more deeply, and take the same care to render his future days happy, that another would take to make miserable. Shall I predict to the opulent banker who astonishes all Paris with his magnificence, that he will one day envy the lot of the wretch he now repulses with disdain? Shall I say to the father exulting in the birth of a son, this child will cover your old age with shame and bring your gray hairs with sorrow to the grave? Shall I tell Florio the flirtations of Lisette, and Lisette the infidelity of Florio? No! were I to do so, I should soon destroy my own credit, and see nothing more of this multitude of visitors who now crowd about my house to receive the approbation of their follies, and the confirmation of their hopes. I have taken a surer path. I tickle the folly of every one of them. Without compromising my character, I give good fortune to the whole world. They go away from my house, quiet in heart and mind, and promise themselves to pay another visit to the little sorceress who makes them so very happy at such a trifling expense.—\*

### PUBLIC NOTICE.

THE undersigned, Commissioners for the amelioration of the navigation of the Richelieu or Chambly River, will receive at their office, in the borough of St. Denis, until the 15th of June next, sealed propositions for the construction or erection of a Dam or Chouee, with a Lock, to be erected about three miles above the village of St. Ours, either in Cut Stones, Common Stones, Pierced Bricks, or in Wood, according to the plans and specifications made by W. R. Hopkins, Esq., Engineer, deposited and where they can be seen at any time, in the hands of Joseph Cartier, Esq., one of the said Commissioners, at St. Antoine.

All propositions addressed by the mail must be sent free of postage.

Two good securities will be required for the due execution of the aforesaid works.

Further information can be had at any time, from the undersigned, in addressing them at their respective residences, or from the said W. R. Hopkins, Esq., at Barker's Hotel, at the Chambly Barrs.

ROBERT DE ST. OURS, at St. Ours.  
JOSEPH CARTIER, at St. Antoine.  
JOS. T. BROLET, at St. Marc.  
L. C. DUVERT, at St. Charles.  
L. P. DESCHAMBAULT, at St. Denis.

Office of the Commissioners, St. Denis, May 11, 1835.

The above Dam and Lock are in dimensions as follows: Lock 200 feet, Chamber 50 feet wide; Dam 675 feet long, 5 feet high.

### STEPHENSON.

Builder of a superior style of Passenger Cars for Railroads.

No. 204 Elizabeth street, near Blocker street, New York.

THE RAILROAD COMPANIES would be well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad now in operation.



**AMERICAN SILK HOSIERY.**—We were shown at Mr. Bird's Store, in this town, this week, some very beautiful specimens of silk hosiery for gentlemen, entirely of American fabric. They were a very neat and fine article, with every indication of durability, and are equal, if not superior to those of European manufacture. The silk was produced and manufactured at Dedham and sold at \$10 per pound. It was made into hose at the manufactory in Newburyport. We believe that small quantities of silk goods have been occasionally manufactured in different parts of our country, within a few years. Among other articles, we were shown about a year since a large variety of vesting patterns, manufactured by Mr. Golding of this town. These things all give an earnest of what may, and ultimately will, be accomplished in this country in the manufacture of silk goods.—[Bunker Hill Aurora.]

The Jingo Tree which grew on the estate of the late Gardner Greene, and of which we spoke the other day, has been safely removed to the Common, where it is to be planted. It is probably the largest tree ever transplanted in this vicinity, being 40 feet high, and the circumference, at 3½ feet from the ground, 4 feet 4 inches. The labor of transplanting it was undertaken by Mr. Sheridan, formerly gardener on the estate. The earth was carefully removed from the roots, and the tree lifted by shears and tackle from the ground, sufficiently high to pass under it a low wheeled drag. The roots were then carefully covered with matting, and the tree lowered upon the drag, on which it was easily supported in an upright position, being kept from falling by ropes attached to the top and held by men who walked along with it to its destination. Mr. Sheridan tells us that there is not the slightest doubt that it will live and flourish in its new location.—[Boston Transcript.]

We have seldom met with a more agreeable *jeu d'esprit* than the following, which we copy from the *Saturday's Magazine* for April 11:—

#### RURAL CHRONICLE.—APRIL.

**Departures.**—For the north:—Frost, Esq. and suite, amongst them we noticed Messrs. Woodcock, Fieldfare, Redwing, &c. &c.

**Arrivals.**—Early in the month, Mr. and Mrs. Swallow; family expected to follow soon. N. B. Mr. and Mrs. S. go out very little as yet.

The Messrs. Blackbird and Thrush have begun to give their annual concert for the season. Their respective ladies "are at home."

The musical foreigner of distinction, the Signor Cuckoo, whose favorite cantatas are so repeatedly encored, is said to be on the look-out for lodgings in the neighborhood: strange stories are in circulation respecting a branch of the Sparrow family.

The Widow Nightingale, to her seat in Poplar Island.

The Misses Martin for the season.

Dr. and Mrs. Rook have made great progress in their new dwelling, which is built on the old site.

The Wren family, so famous in the annals of architecture, have lately designed some edifices, which show them to be as skilful as ever in that admirable art.

#### COURT NEWS.—GAZETTE EXTRAORDINARY.

Yesterday, her Serene Highness, Queen Flora, held her first drawing-room this season, which was most numerously attended. The court opened soon after sunrise; Mr. Skylark was in attendance to announce the company.

The Misses Daisy were the earliest visitors; after which arrivals were constant.

Messrs. Bugle, Broom, Lilac, Orchis, Periwinkle, Ranunculus, Stellaris, &c. &c., all richly and tastefully attired.

The numerous family of the Anemones paid their devoirs early. These elegantes were variously habited; some wore rich scarlet bodices, others purple and green train; the Misses A., in robes of simple white and green, almost surpassed in beauty their more splendid relatives.

The Misses Violet, on their return to the country, introduced by the Ladies Primrose; the amiable and modest appearance of the former was much noticed, the costume of each party was thought very becoming, and skilfully assorted to set off the charms of both.

The Misses Blue-Bell wore robes of azure tissue, and were much admired for the sylph-like elegance of their forms.

The beautiful Germander family, with their never-to-be-forgotten eyes of heavenly blue, attracted universal attention.

The arrival of the Rose family was anxiously expected.

The Misses Cowslip were presented; it has been the fashion to call them the "pretty rustics;" but they were most graciously received, and the delicate propriety of their dress and manners much admired.

The Lady Cardamines, costumes of the finest linen.

Mrs. Tulip, body and train of crimson and gold; this truly grand dress had a superb effect.

Messrs. Chesnut, Oak, Birch, Lime, &c., &c., sported new bright green liveries, of various shades.

Messrs. Blackthorn, Pear, Apple, &c. &c., crowded round their sovereign, eager to pay their dutiful homage; they made a magnificent show, in rich suits of white, red and green.

The company were greatly delighted with a concert of vocal music from a large party of the best performers in the neighborhood, consisting wholly of amateurs.

The Court broke up, having partaken of a few drops of a light and charming beverage, but not before the Widow Nightingale, (who had joined the performers of the morning) had been intreated to favor the company with a song; that well-bred lady instantly complied, and poured upon the ears of her delighted auditors one of her most heart-thrilling melodies.

#### MILL-DAM FOUNDRY.

ON MONDAY, June 1, at 12 o'clock, at City Hall, (unless previously disposed of at private sale,) will be sold by auction, the above well known establishment, situated one mile from Boston. The improvements consist of—

No. 1. *Boiler House*, 50 feet by 30 feet, containing all the necessary machinery for making boilers for Locomotives and other steam Engines.

No. 2. *Blacksmith's Shop*, 50 feet by 20, fitted with cranes for heavy work.

No. 3. *Locomotive House*, 54 feet by 25, used for putting together Locomotive Engines. Several of the best Engines in use in the United States have been put in this establishment.

No. 4. A three story brick building, covered with slate, 120 feet by 46, containing two water-wheels, equal to 40 horse power; Machine Shop, filled with lathe, &c.; Pattern Shop; Rolling Mill and Furnaces, capable of rolling 4 tons of iron per diem, exclusive of other work; three Trip Hammers, one of which is very large; Engine for blowing Cupola Furnaces, moved by water-wheel; one very superior 12 horse Steam Engine, which could be dispensed with; and a variety of other machinery.

No. 5. An Iron Foundry, 80 feet by 45, with a superior air Furnace and two Cupola, Core oven, Grates, &c. fitted for the largest work. Attached to the Foundry is a large ware-house, containing Patterns for the Castings of Hydraulic Presses, Locomotive and other Steam Engines, Lead Mill Rolls, Gearing, Shafts, Stoves, Grates, &c. &c. These were made of the most durable materials, under the direction of a very scientific and practical Engineer, and are supposed to be of great value.

No. 6. A building, 65 feet by 38, containing a large stock of chimneys, and furnaces, for making Cast Steel. This building is at present used as a boarding-house, and can accommodate a large number of men.

No. 7. A range of buildings, 200 feet long by 36, containing counting room, several store rooms, a Brass Foundry, room for cleaning castings, a large loft for storing patterns, stable for two horses, &c. &c.

The above establishment being on tide water, presents greater advantages for some kinds of business than any other in the United States. Coal and iron can be carried from vessels in the harbors of Boston, to the wharf in front of the Factory, at 25 to 30 cents per ton. Some of the largest jobs of iron work have been completed at this establishment; among others, the great chain and lift pumps for freeing the Dry Dock at the Navy Yard and Charleston.

The situation for Railroad work is excellent, being in the angle formed by the crossing of the Providence and Worcester Railroads. The Locomotive "Yankee," now running on the latter road, and the "Jonathan," purchased by the State of Pennsylvania, were built at these works. With the Patterns and Machinery now in the premises, 12 Locomotives and as many tenders, besides a great quantity of cars and waggon, could be made per annum.

For terms, apply to

THOS. J. ECKLEY, Treasr. &c., Boston, or to ROBERT RALSTON, Jr., Philadelphia. Boston, April 21, 1835.

#### RAILROAD CASTINGS.

MANY & WARD, Proprietors of the Albany Eagle Air Furnace and Machine Shop, will make to order car wheels, chairs and knees, and every other description of castings required for railroads.

#### RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

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Railroad Spikes of every description, required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use. Ship and Boat Spikes made full size under the head, so as not to admit water.

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#### RAILWAY IRON.

95 tons of 1 inch by 1 inch,	Flat Bars in lengths of
300 do. 1½ do. do.	14 to 15 feet, counter sunk
40 do. 1 do. do.	holes, undercut at an angle
800 do. 1 do. do.	of 45 degrees, with splicing
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250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2½, 3, 3½, 4, 5, and 6 inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON,  
9 South Front street, Philadelphia.  
Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use both in this country and Great Britain, will be exhibited to those disposed to examine them. d1timeowr

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Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by

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The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new, among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also a Railroad Goniometer, with two Telescopes—and a Leveling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,

Mathematical Instrument Maker,

No. 9 Dock st., Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested. Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES F. STABLER, Sup't of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.  
Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use; and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germanstown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY B. CAMPBELL, Eng. Philad. ml ly  
German, and Norristown Railroad.